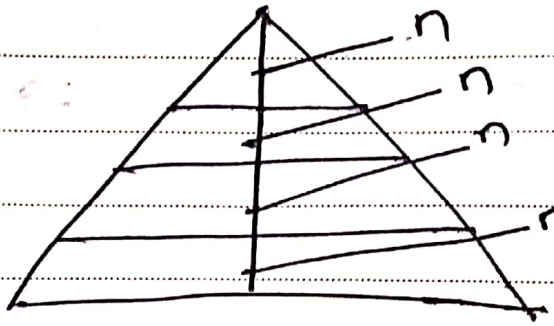
IQ:

Think Better - Write Better

Non-verbal Reasoning:

Analytical Reasoning:-

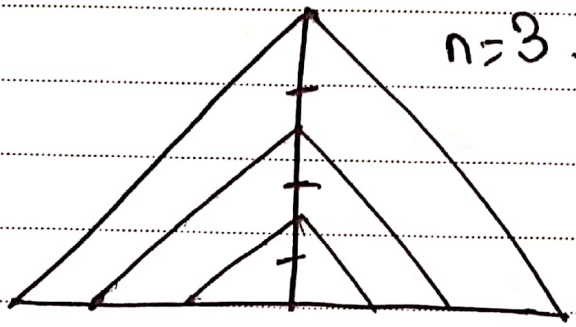
Q. 1) 

△ यसमा कतिवटा △ छन् ? i.e. 3

3n = Total no.

= 3×4

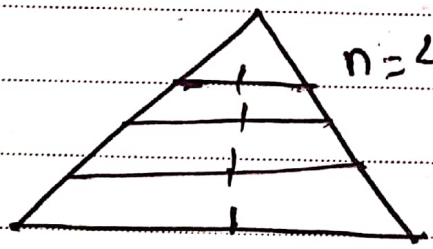
= 12.

Q. 2) 

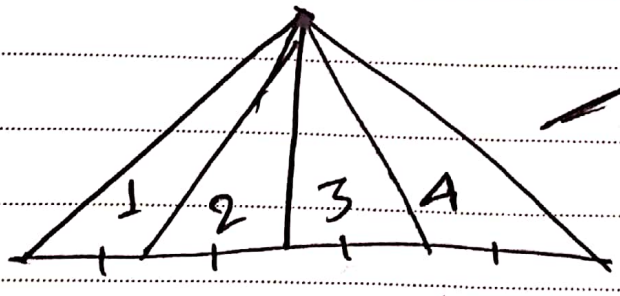
n=3. Lowest △ = 3 no. of △'s.

total no = 3×n

= 9

3) 

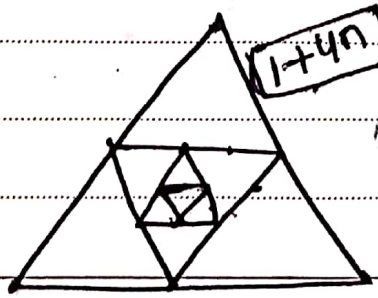
n=4. 1×n = 4 = no. of △

4) 

1+2+3+4 = 10

or

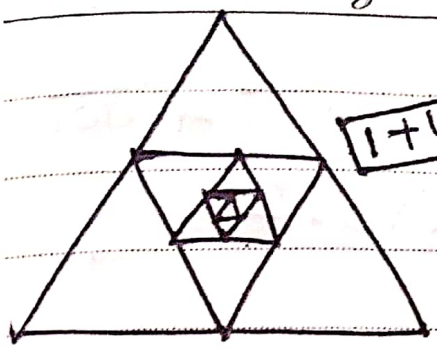
$\frac{n(n+1)}{2}$, n=4

5) 

बाहीरको △ नगनी overlap भएर बनेको भित्री △'s = 3 := n.

1+4×3 = 13

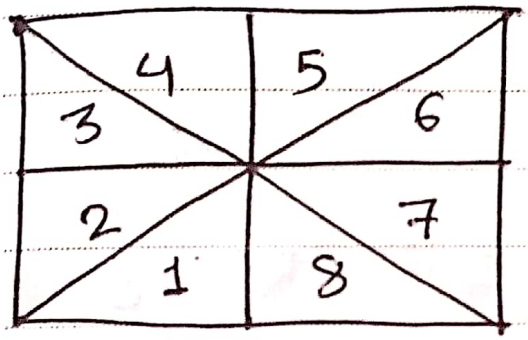
6)



, n=4

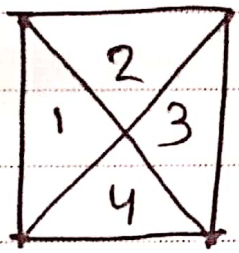
Total no. of Δ's = 1+4×4
= 17.

7)



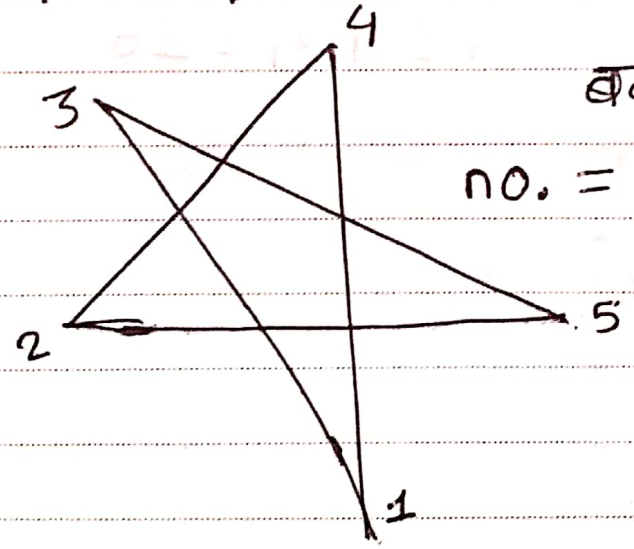
Total no. of Δ's = 8×2
= 16.

8)



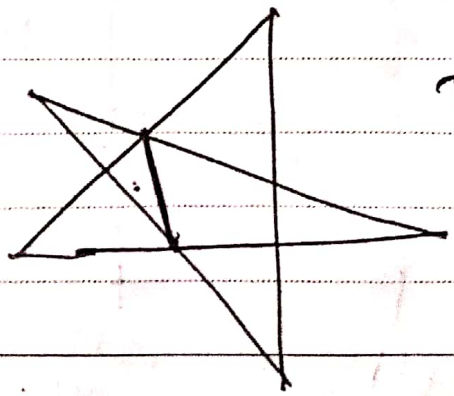
4×2 = 8

9)



1. चुच्चो ले 2 वटा बनाउँछ। so,
no. = 10.

10)



Total = 10+4 = 14.
एउटा line ले 4 वटा Δ बनाउँछ।

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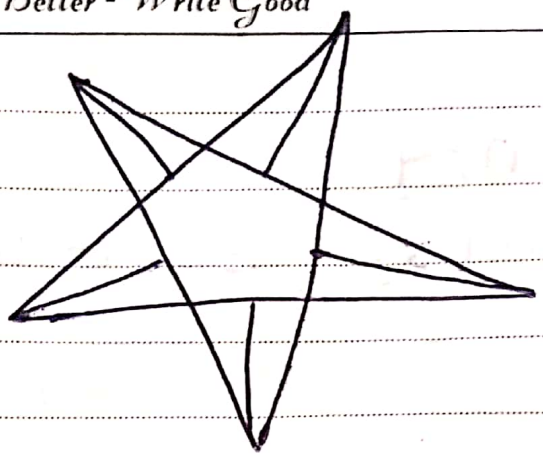
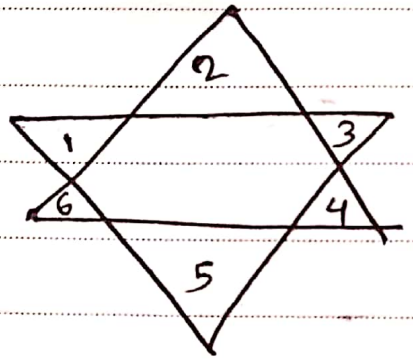
11)



रश्मि चुच्चोमा 4 वटा

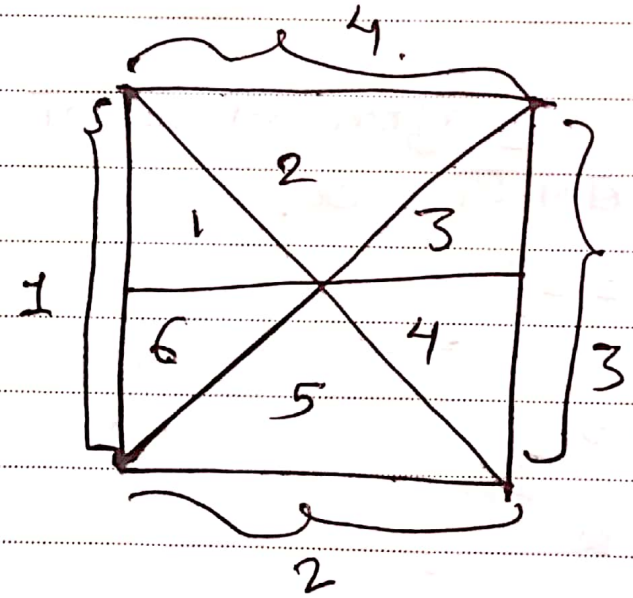
$\Rightarrow 4 \times 5 = 20$

12)



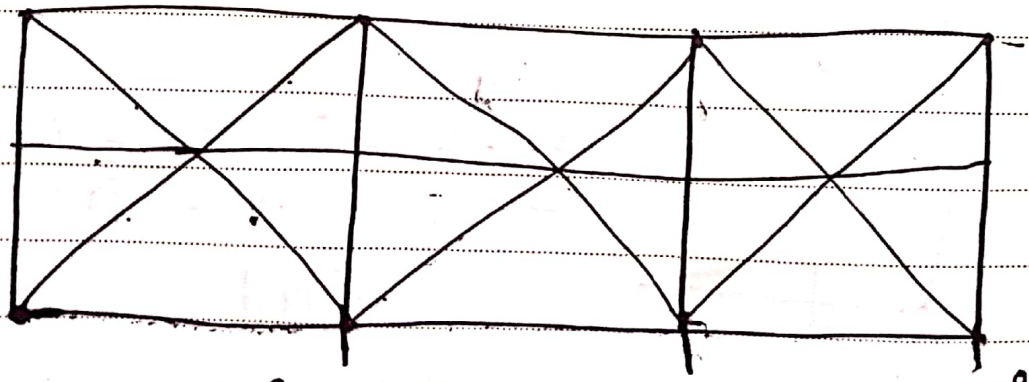
6 + छूलो 2 वटा = 8

13)



$6 \times 2 + 4 = 16$.

14)



16 + 20 + 20 = 56

6 × 2 = 12 + 4 = 16

12 + 4 + 4 = 20

12 + 8 = 20

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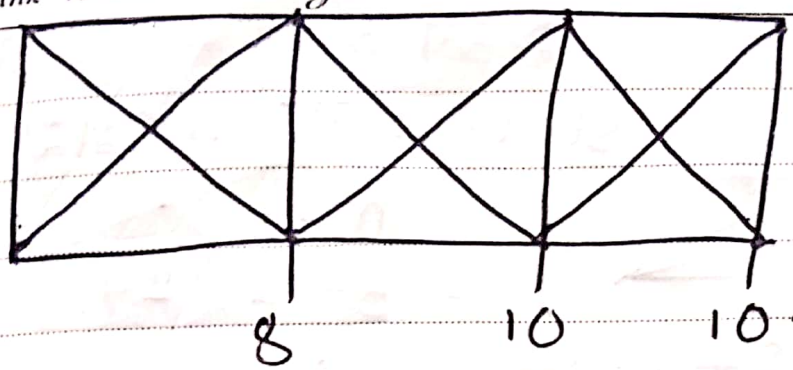
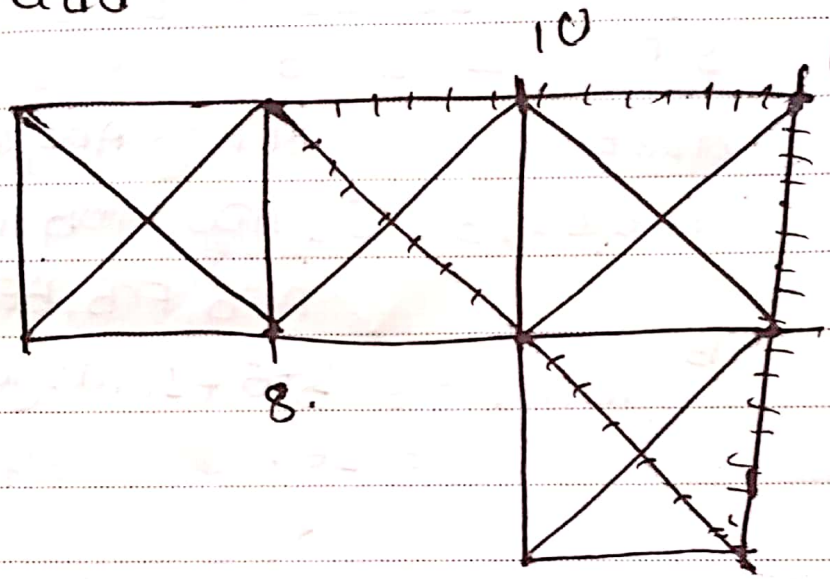
15)



= 28.

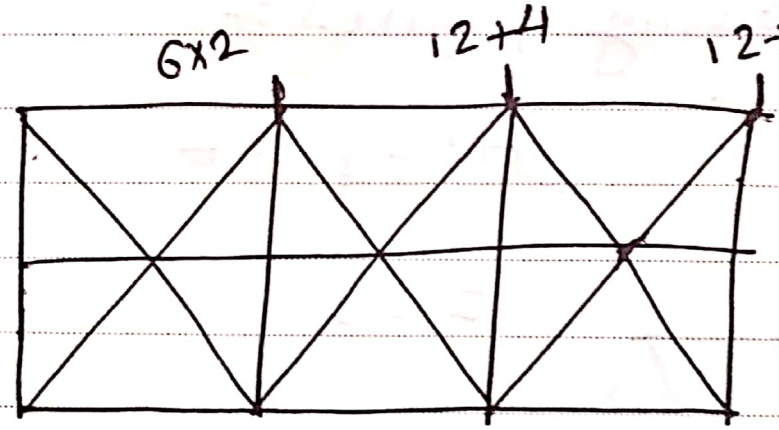
त्यस पछी भुइको St. Line count गर्ने र add गर्ने

16).



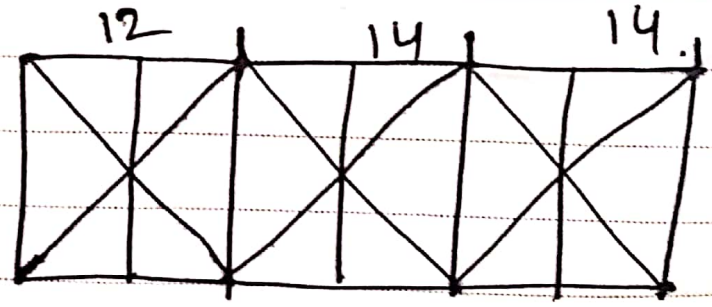
10+10+10+8+1 = 39.

17).



TOTAL = 16+16+12 = 44.

18)



⇒ 40

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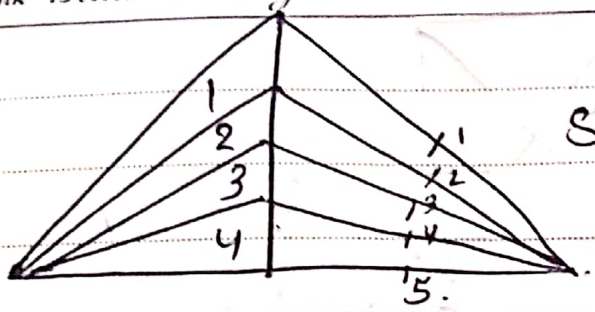
19).



एउटा side मा भएको st. line मा n भए,

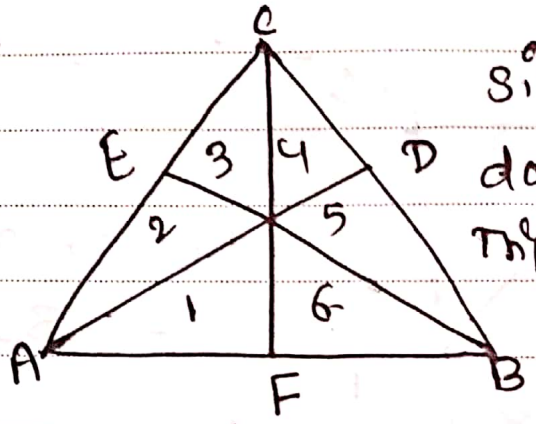
$n^2 - 1$.

$= 5^2 - 1 = 24$.

$(1+2+3+4) \times 2 + 4 = 24$

#.

①.



single Δ, 1 = 6.

double Δ's, 2 = 3 (AOB, AOC, COB)

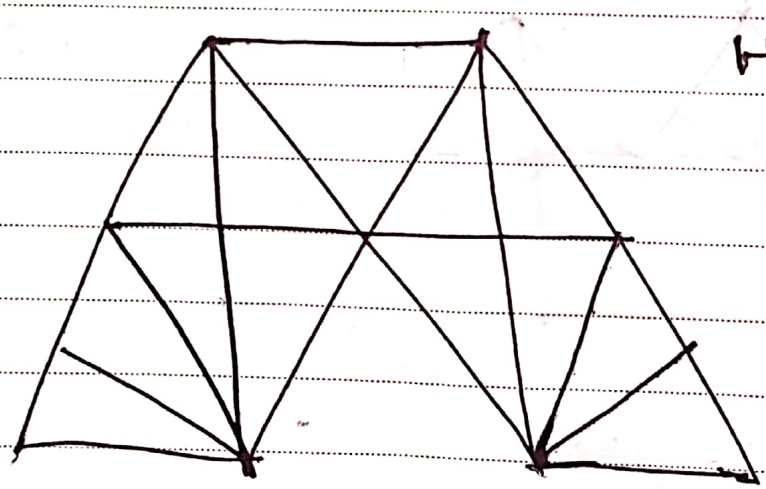
Triple Δ's, 3 = 6 (ADC, ADB AFC, AEB, FCB, BEC).

Total = 6 + 3 + 6 + 1 (large)

= 16.

Remember following figures :-

①



Half pant

= 29

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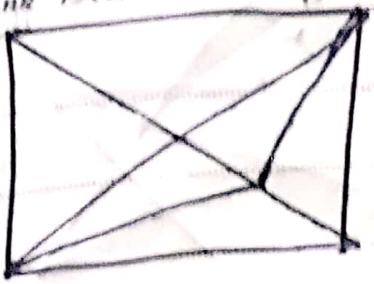
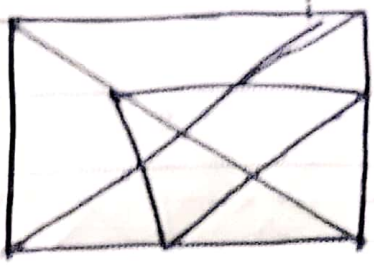
2)



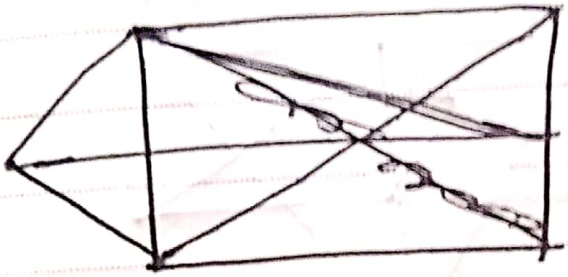
चङ्गा तल = 15

3)



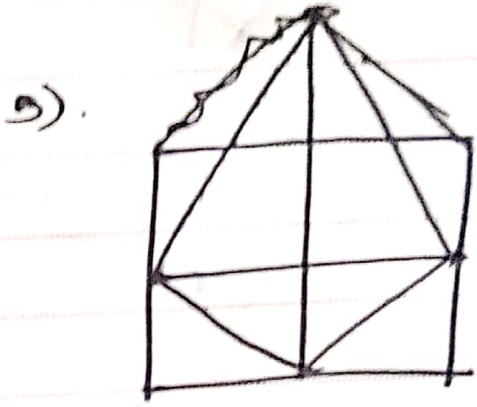
चङ्गा माथी = 21

4)



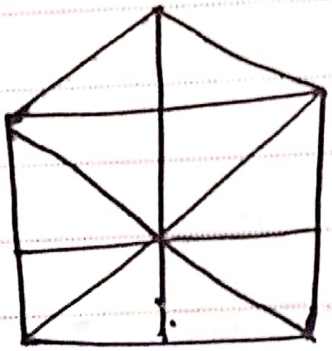
pencil = 15

5)



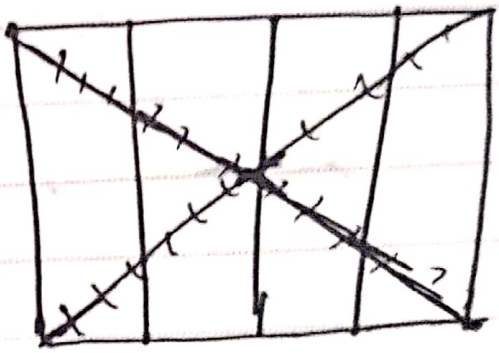
डुङ्गा = 15

6)



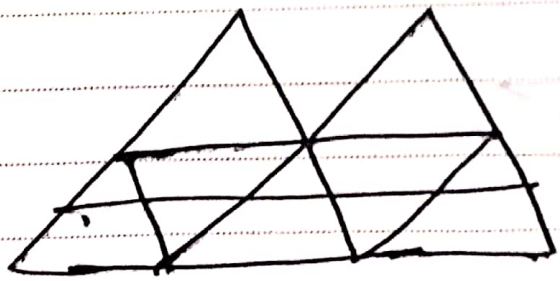
झ्याम = 21

7)



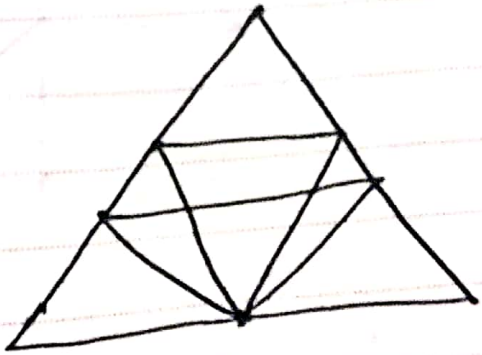
झ्यालो X = 48

8)



पुई चुच्चो माथी = 18

9)



पुई चुच्चो तल = 18

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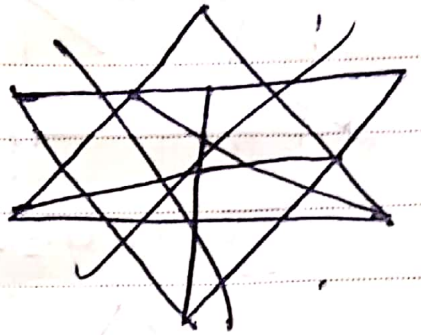
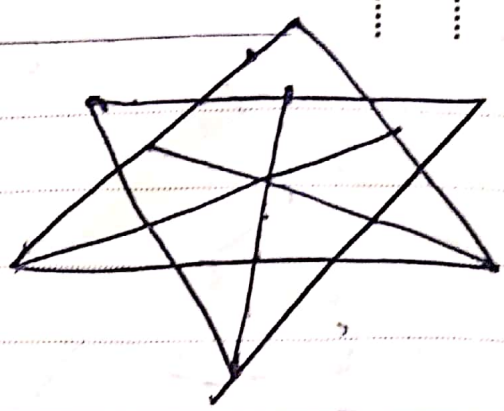
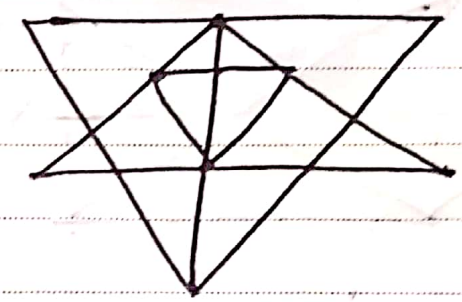
10)



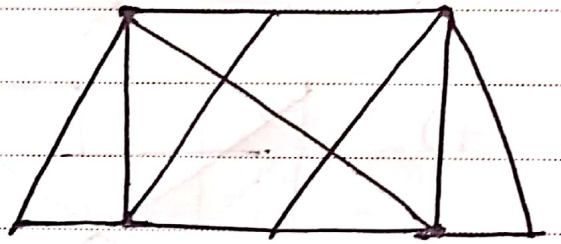


हेर्दा षट्कोण 2 वटाको

27

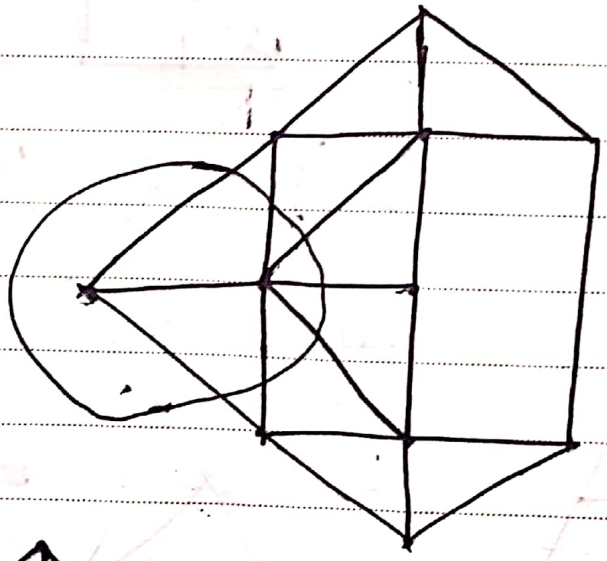


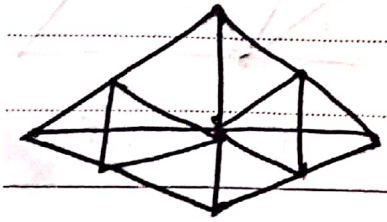
11)



छाका टोपी = 14

12)





घसको २ छाका टोपीको = 14

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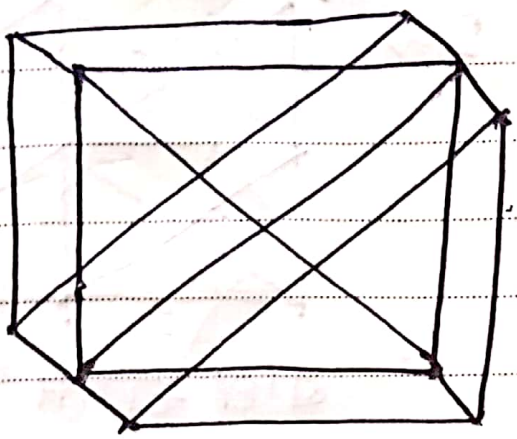
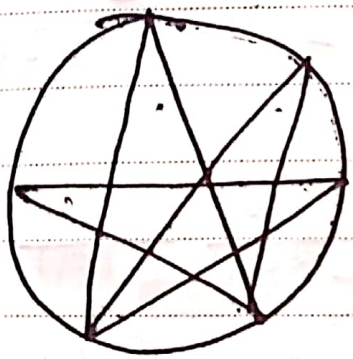
13)



24

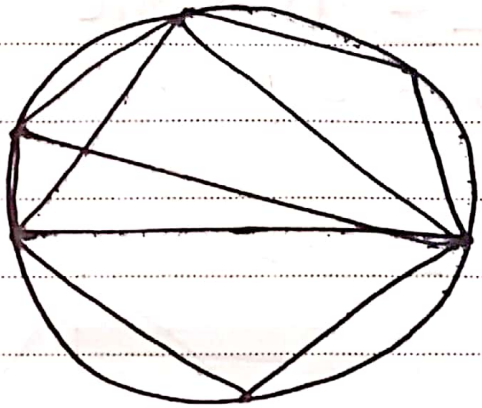
जम्मा त्रिभुजहरु = 24

14)



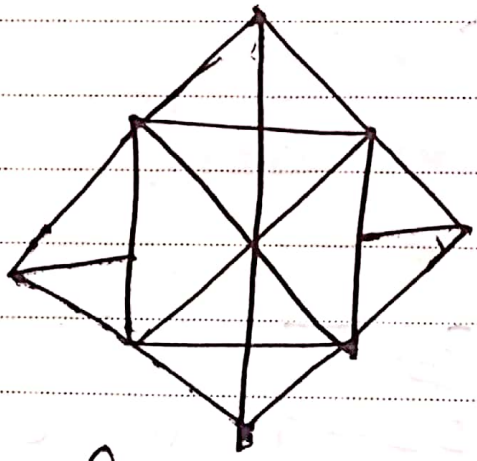
6 चुच्चे = 28

15)



10

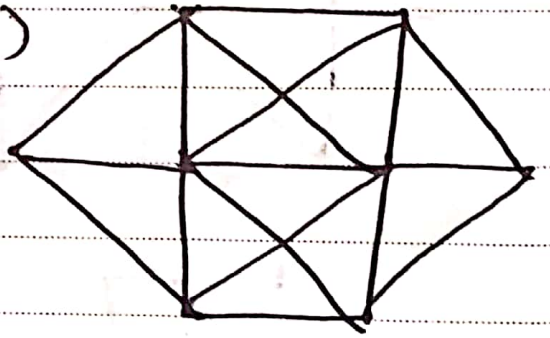
15)



1 को 4 Δ = 28

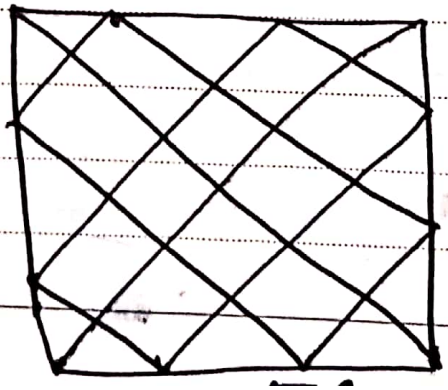
16)

9

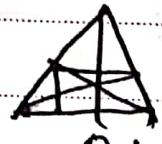


2 वर्ग 2 Δ = 28

17)

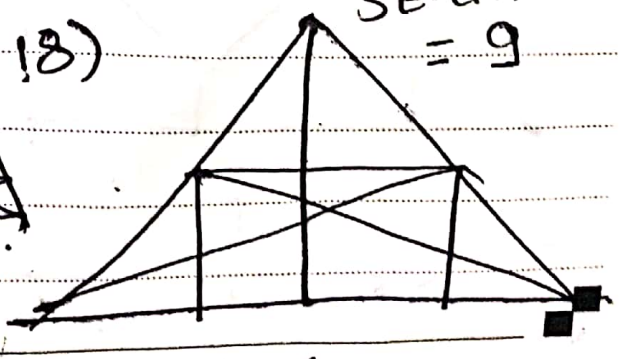


18)



30

St-line = 9



Δ = 36

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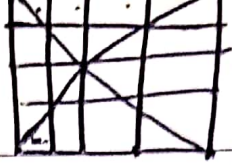
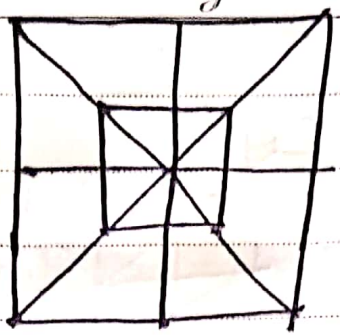


⇒ 48 (4×4, X = 48)

19)

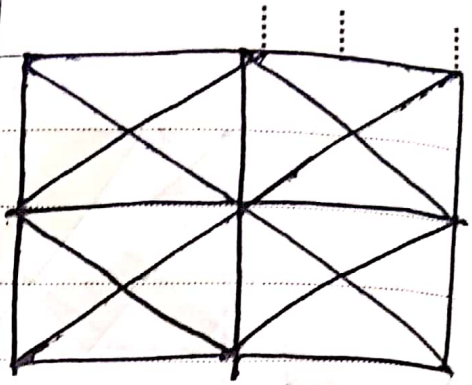


माकुरेको जालो

32 - Triangle

10 - Square.

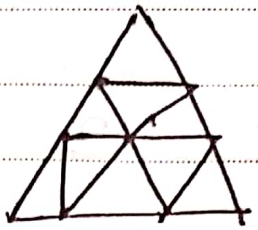
20)



बाघ चाल

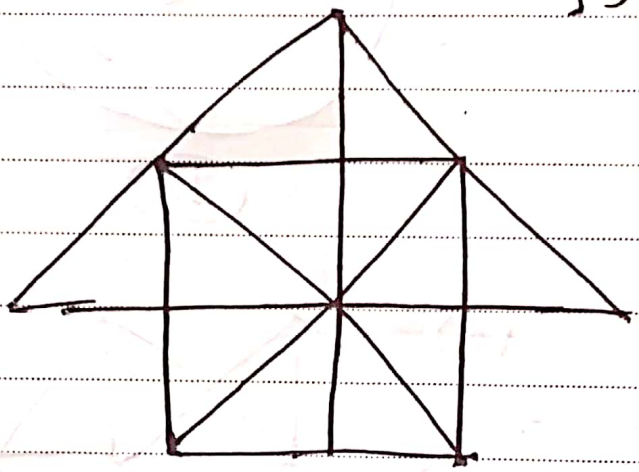
44 - Triangle

10 - square.



⇓ 13

21).

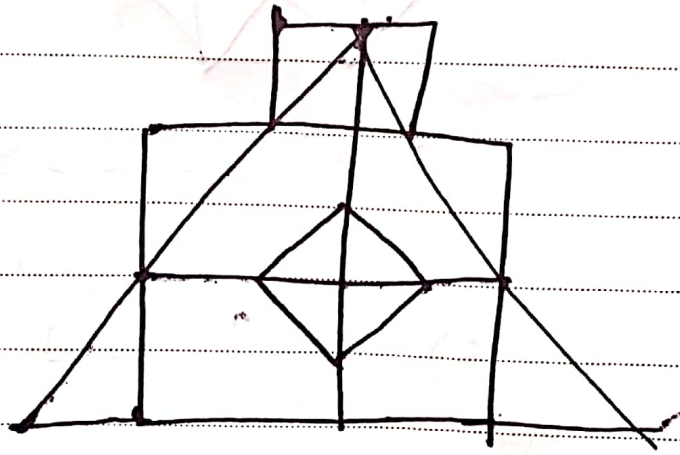


मन्दिरको घोला

28 - Triangle.

6 - square.

22)

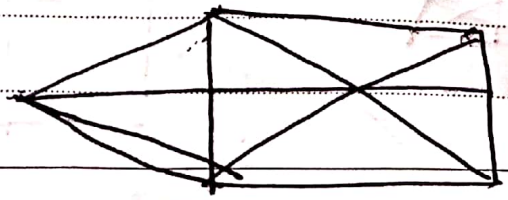


गुम्बा

21 - Triangle

7 - Square.

*



No of Δ = 17

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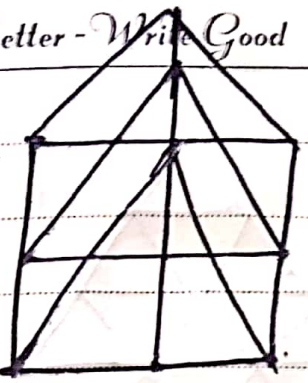
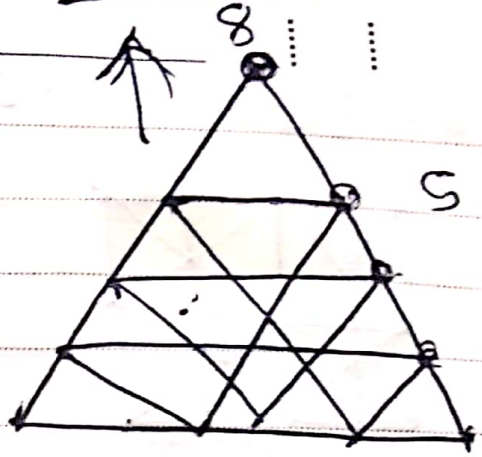
$(n^2-1)(2n-1)$

23).



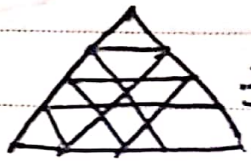
3-चुच्चे माथी = 21

24).



⇒ 27

Square counting:.



⇒ 25

(1)

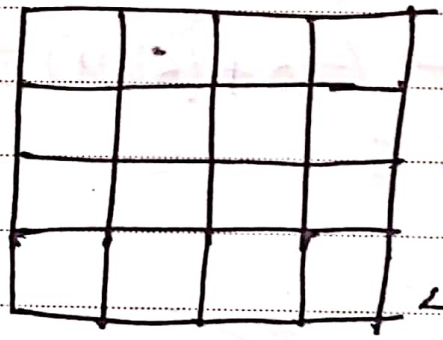
3x3.

Row column = equal.

• 3x3 मा 3 सम्मको संख्या square add गर्ने

$3^2+2^2+1^2 = 14$.

(2)



4x4

$= 4^2+3^2+2^2+1^2$

$= 30$.

(i.e. 14+16).

(3)

5x5 = 55 Squares

6x6 = 91 "

7x7 = 140 "

8x8 = 204 "

9x9 = 285 "

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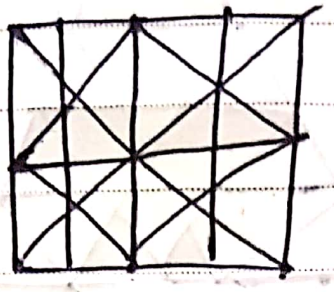
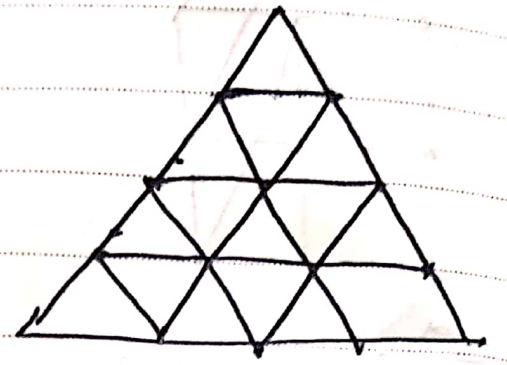
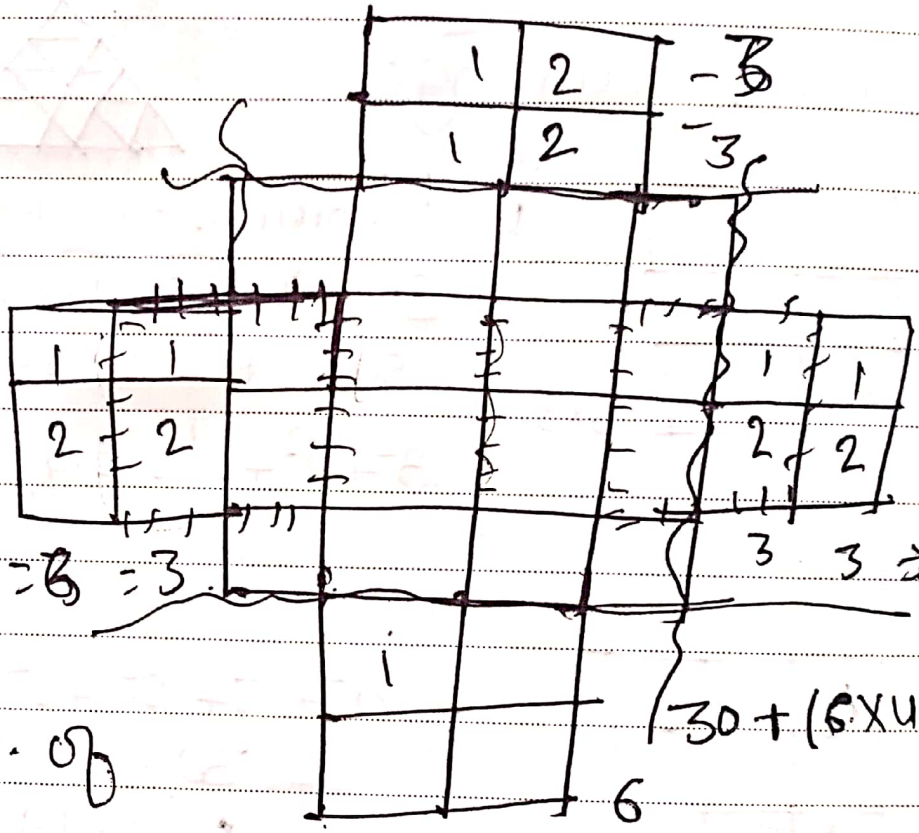
Straight lines :-

① 

(14)

② 

(11).

③ 

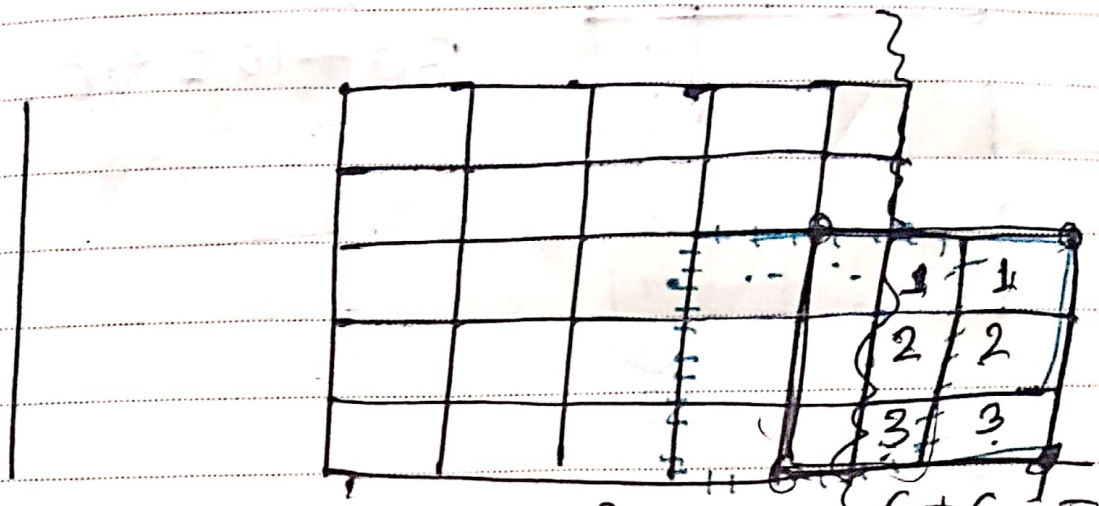
Total no. of square

$= 30 + 4 \times 5 = 50 + 4 = 54.$

$30 + (6 \times 4) = 54$

④

(5).



55 6+6 =67.

~~55+6+2+6+2~~

~~=75~~

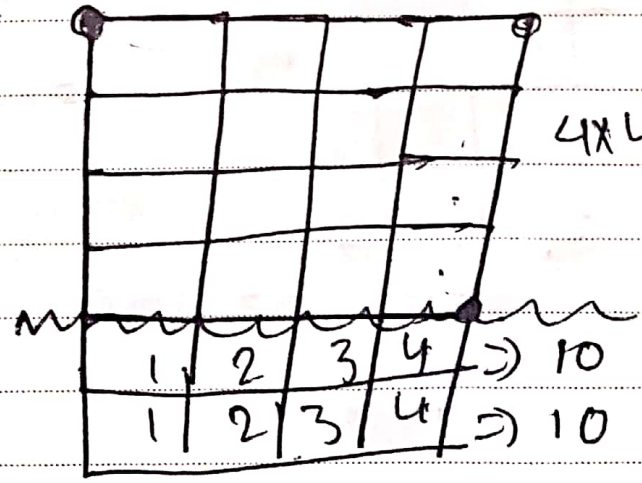
~~=65~~

55+6+2+2+1+1 = 67

~~Form~~ Ench:- 55+(1+2+3)x2

= 67.

6).



4x4 => 30+20

= 50

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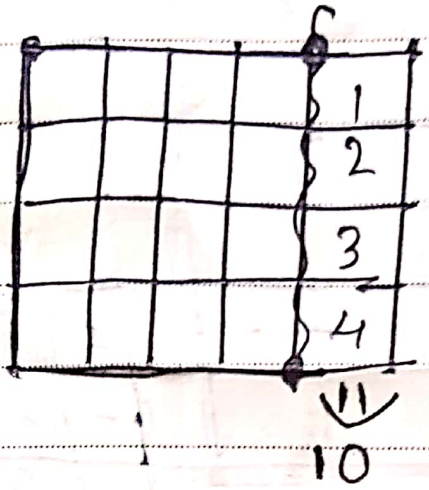
7).



$30+10=40$.

8). # Quadrantral | Rectangle.

(1)

1	2	3
2		
3		

$=6$

6

$6 \times 6 = 36$

#.

$\frac{R(R+1)}{2} \times \frac{C(C+1)}{2}$.

R = Row, C = columb.

(2)

1	2	3	4	$\Rightarrow 10$
2				
3				
4				
5				

11

15

$15 \times 10 = 150$

$\frac{5(5+1)}{2} \times \frac{4(4+1)}{2}$

$= 5(6 \times 5)$

$= 150$

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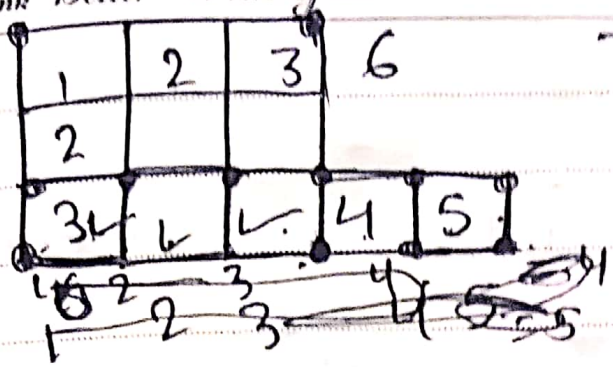
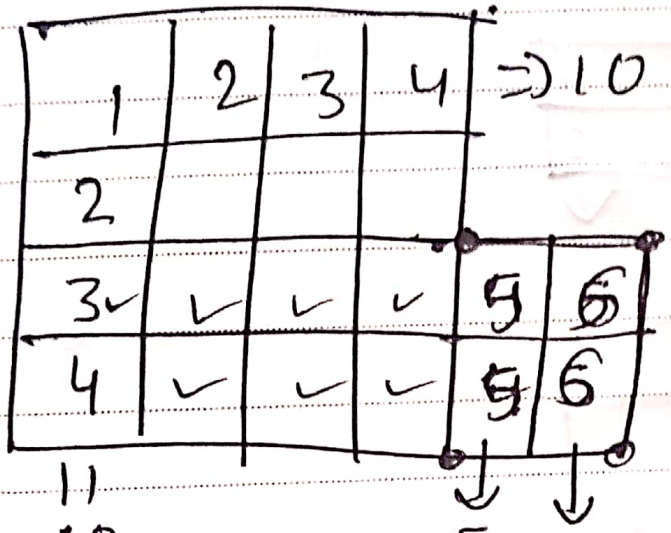
(3)



$36 + 4 + 5 = 45$.

$6 \times 6 + 4 + 5 = 45$

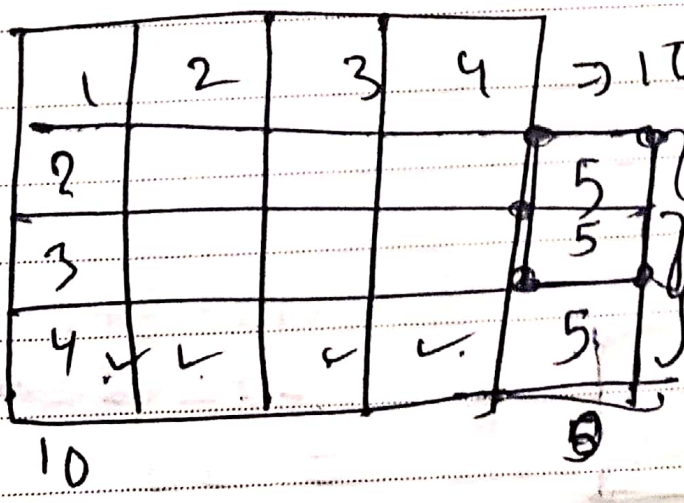
(4)



~~$10 \times 10 + 4 + 5 + 4 + 5 + 9$~~.

$10 \times 10 + (5+6) \times 3 = 133$.

(5)



$10 \times 10 + 5 \times 3 + 5 \times 3 = 130$.

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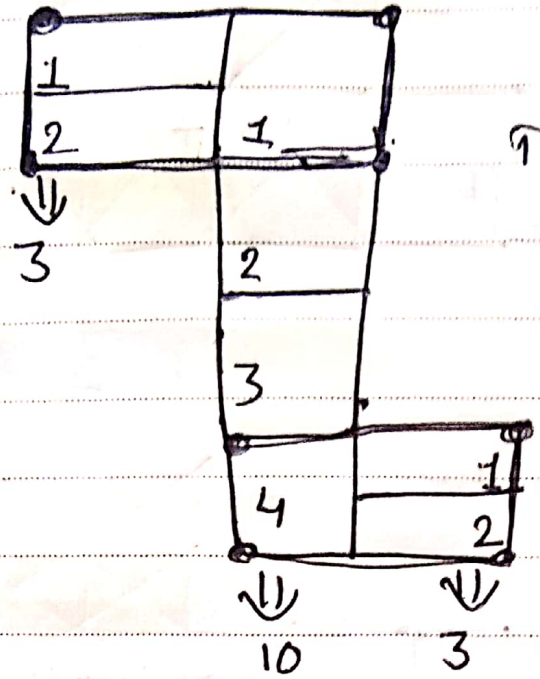
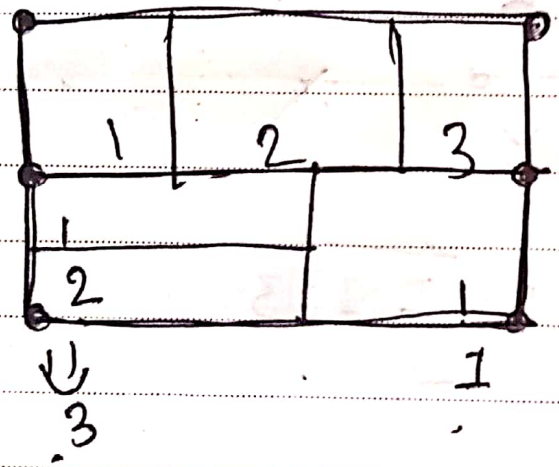
(6)



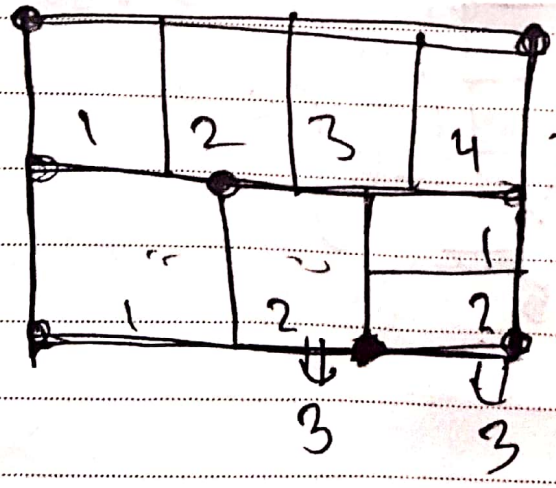
Total = 3+10+3+1+1
= 18.

(7)



⇒ 6+3+1+1
= 11

(8)



10+3+3+1+
1+1
= 19

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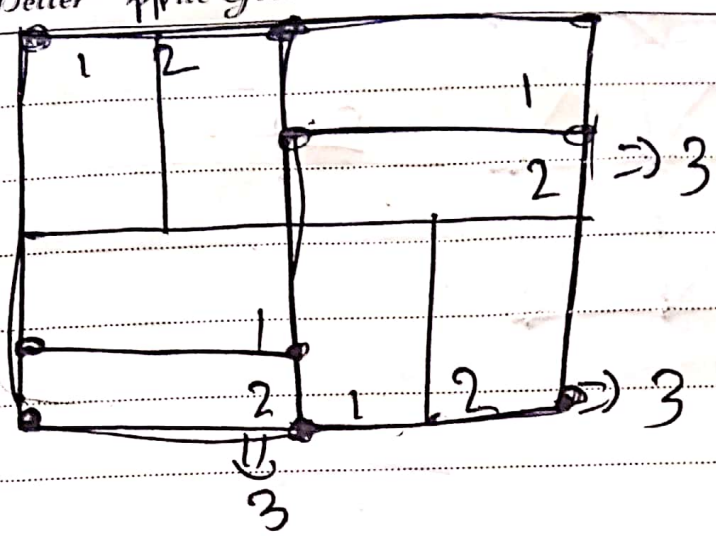
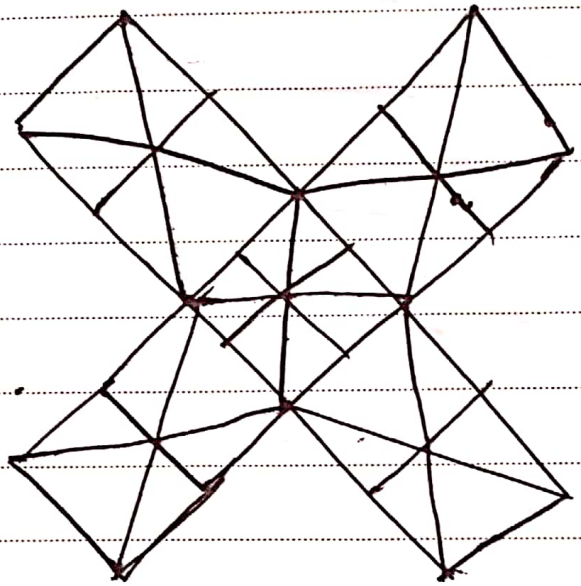
(9)



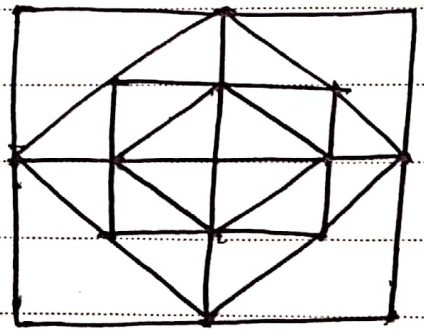
3+3+3+3+
1 +2+2+2+
2.
= 21

(10)



कोणों = 18 sq

(11)



5+5+2 = 12

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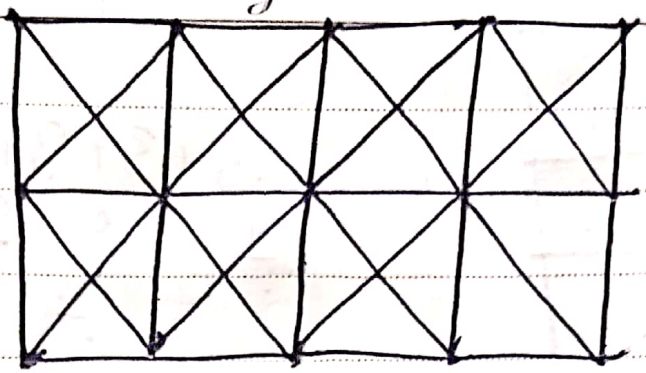
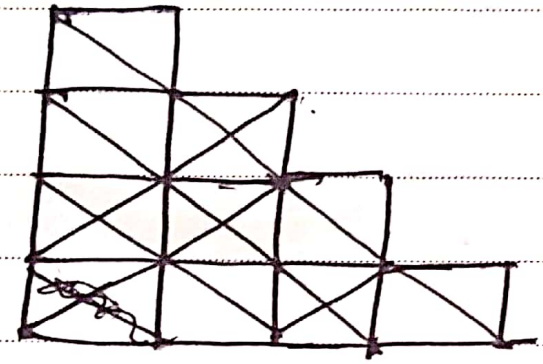
(12)



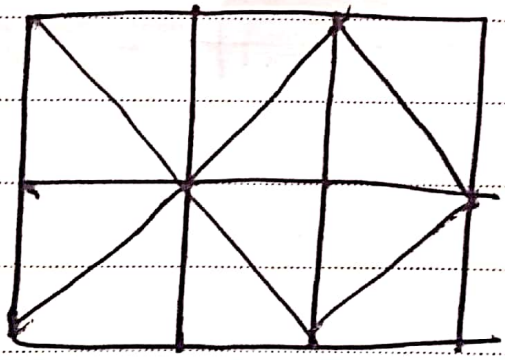
24.

(13)



16

(14)



9

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coding De-coding

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① Alphabet coding:-

1	2	3	4	5	6	7	8	9	10	11	12	13
A	B	C	D	E	F	G	H	I	J	K	L	M
26	25	24	23	22	21	20	19	18	17	16	15	14
Z	Y	X	W	V	U	T	S	R	Q	P	O	N

opposite को no. जोड़ना 27

vowel sound

A	E	I	O	U
1	2	3	4	5

Q.1) If NEPAL is coded as PGRCN Then, what is the code for INDIA sol?.

NEPAL ⟶ PGRCN.

INDIA ⟶ KPFKC

+1 +1 +1,
-1 -1 -1,
+1 +2 +3 +4 +5 ----
-1 -2 -3 -4 -5 ----.
+2 +4 +6 +8 ------
-6 -6 -6 ----

2) If DANGER is coded as ELYRB. Then what is the code for RAVRE.

Soln,

R A V R E ⟶ CPTYI.

3) If NEPALGUNG coaded as GNUGLAPEN. what is the code for BIRATNAGER.

Soln,,

REGANTARIB #.

4) ⇒ NEPALGUNG = ENAPGLNUG.

BIRATNAGER = IBARANEGR

first two two वटा वटा alphabet को position interchange गरेर ।

5). SURKHET = SVTSDGJ.

DAILEKH = DBKTGAMA

SURKHET ⟶ S V T S D G J

DAILEKH ⟶ J B E G J D K

SUR ⟶ (RUS) ⇒ SVT.

TEHK ⟶ (T-1)(E-1)(H-1)(K-1) i.e. S D G J

+ = 27.

6. GOAT ⟶ TLZG

PARROT = KZIILG

7. BUS = ACTVRT

TRUCK = SUBSTVBDJL

8. MIND = KGLB

ARGUE = YEPSC

DIAGRAM = ?

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Direct code.

DIAGRAM ⇒ BGYPEYK.

माथी दिएको word मा भएे alphabet भोटिन्छन् भने ती त्यही त्यही लेख्ने.
a = b भयो भने b a को place मा b लेख्न पाइन्छ तर b को place मा a लेख्न पाइँदैन।

9) DAILEKH = @ # $ ÷ ₹ £ + %

KALE = + # ÷ £

10)

D	A	I	L	E	K	H
@	#	$	÷	£	+	%

find code fore, @ # £ #

a) DAKA
b) KALA
c) HALK
d) DAEA

11. PEN = R2P

vowel, E = 2

CUP = E5R

vowel, U = 5

12.

1	2	3	4	5	6	7	8	9	10	11	12	13
A	B	C	D	E	F	G	H	I	J	K	L	M

Z	Y	X	W	V	U	T	S	R	Q	P	O	N
26	25	24	23	22	21	20	19	18	17	16	15	14

Number coding:

Q.1) If DOG is coded as 26, then what is the code for CAT.

Sol^n

4 +5 +7

D O G = 26

C A T = 24

3 +1 +20

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2). RED = 1854

18 5 4

GREEN = 7185514

7 18 5 5 14

18 5 4

3). RED = 2298 (+4 in each no.)

GREEN = 11229918

7 18 5 5 14

7 15 1 1 20

4). GOAT = 223179

DUCK = 135236

4 21 3 11

11+2=13

3+2=5

21+2=23

4+2=6

i.e.,

135236

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5). CUP = 24611

HAT = 19267

8 1 20 i.e. (27-8)(27-1)(20-1)

19267

opposite को NO. हैन

C U P
↓ ↓ ↓
X F K
↓ ↓ ↓
24 6 11

6). NEPAL → 2/3, vowel = 2
consonent = 3

DAILEKh = 3/4 vowel = 3
consonent = 4

fraction मा ques. आयो भने
vowel र consonent को संख्या
हेर्ने

(9 Alphabet) x 3

7) - NEPALGUNJ = 27

MANAKAMANA = 30

(10 alphabet x 3)

(no. of alphabet को square, cube., certain no. ले divide, multiply गरेको हुन सक्छ।)

word- code :-

1). If Red is called Black, Black is called Blue, Blue is called Green, Green is called yellow, Then what is the color of Human blood.

Ans → Red = Black

[i.e. सबै red black हुन but black लाई red भन्न मिल्दैन]

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sentence - code :-

1) - Bright little boy = @ # $
- Tall big boy = @ £ X
- Beautiful little flower = $ ÷ +

Then what is the code for bright.

Ans :- यदि ques मा दोहोको word 1 sentence मा भयो भने

1st & 2nd sentence मा common भएको word र cut गरेर, code दिने

Bright little boy = @ # $
Tall big boy = @ £ X
Beautiful little flower = $ ÷ +

bright = #

* what is the code for boy :
~~bright~~
यदि 2 वटा sentence मा word common छ भने,

two ota को common code ans i.e boy = @

Little = $

* code for Tall :-

bright little boy = @ # $
Tall big boy = @ £ X
Beautiful little flower = $ ← ÷ +

Can not be determined

* Beautiful : can not be determined.

Verbal

Jumble Spelling Test. (1.1)

Q.1) If you re-arrange the letters of CIFAIPC, you would have the name of .....

a) River
b) country
c) player
d) ocean

PACIFIC.

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Q.2) If you replace the letters in 'COAT' you would have the name of animal which is that letter?

a) K b) S GOAT
c) G d) None.

Q.3) TOSUL (re-arrange it's flower)

⇒ LOTUS

1.2, series

* verbal series

1	2	3	4	5	6	7	8	9	10	11	12	13
A	B	C	D	E	F	G	H	I	J	K	L	M

26	25	24	23	22	21	20	19	18	17	16	15	14
Z	Y	X	W	V	U	T	S	R	Q	P	O	N

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D. D, F, H, J, L, N

+2 +2 +2 +2 +2

Ans: D + 2 = F
F + 2 = H
H + 2 = J
J + 2 = L
L + 2 = N

2). C, B, Z, W, S, N

29 28 26 23 19 14

-1 -2 -3 -4 -5

3). G, K, I, M, K, O, M, S

+4 -2 +4 -2 +4 -2 +4

4). EW, CZ, AC, YF, WI

+3 +3 +3 +3

-2 -2 -2 -2

5). U, SR, PON, LKJI, GFEDC

T S M H

1. 1, 4, 9, 16, . . . ? . . . (25)
1^2 | 2^2 | 3^2 | 4^2 – 5^2

2. 0, 3, 8, 15, 24, 35
1^2-1 | 2^2-1 | 3^2-1 | 4^2-1 | 5^2-1 | 6^2-1

3. 0, 2, 6, 12, 20, 30
1^2-1 | 2^2-2 | 3^2-3 | 4^2-4 | 5^2-5 | 6^2-6

$1^2+1, 2^2+1, 3^2+1, \ldots$

$1^2+1, 2^2+2, 3^2+3, \ldots$

$1^2+1, 2^2-1, 3^2+1, 4^2-1, \ldots$

$1^2+1, 2^2-2, 3^2+1, 4^2-2, \ldots$

Trick चाहा पाउन सकिएन भने, no. हरुको diff. पत्ता लगाउने, diff. मा भएको no. use गरेर निकाल्ने

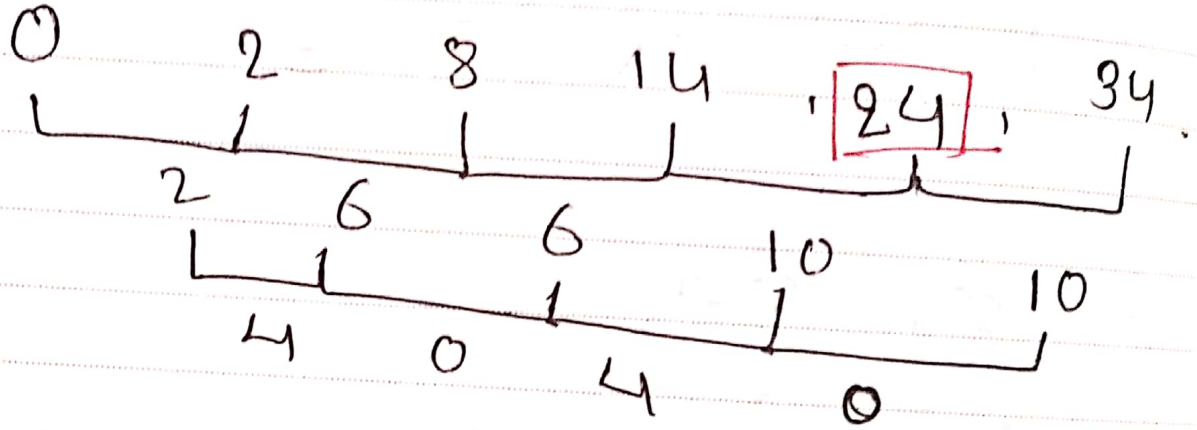
4). 5, 6, 9, 15, 25, 40.

1 3 6 10 15

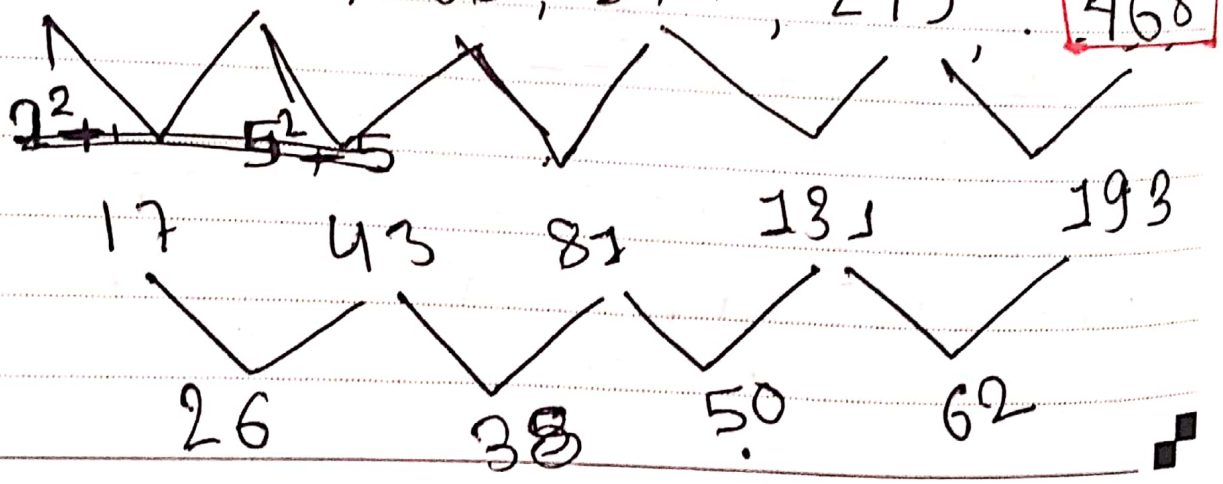
5). 0, 2, 8, 14, 24, 34

1^2-1 2^2-2 3^2-1 4^2-2 5^2-1 6^2-2

Or,



6). 3, 20, 63, 144, 275, 468



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7). 5, 11, 23, 47, 95

X2+1 X2+1 X2+1 X2+1

8). 3, 5, 11, 21, 43, 85, 171

(X2-1) (X2+1) (X2-1) (X2+1) (X2-1) (X2+1)

9). 5, 10, 12, 24, 26, 52, 54, 108

X2 +2 X2 +2 X2 +2 X2

10). 1, 2, 5, 12, 29, 70

X2 X2+1 X2+2 X2+5 X2+12

29 X2+12 = 70

11). 1, 2, 3, 6, 9, 18, 27, 54

X3 X3 X3 X3 X3 X3

~~12). 125, 12, 7~~

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12). 125, 12, 25, 24, 5, 48, 1

-1.5 -1.5 -1.5

13). 3, 5, 8, 13, 21, 34, 55

3+5 = 8,
8+13 = 21
21+13 = 34
34+21 = 55

14). 240, 240, 120, 40, 10, 2

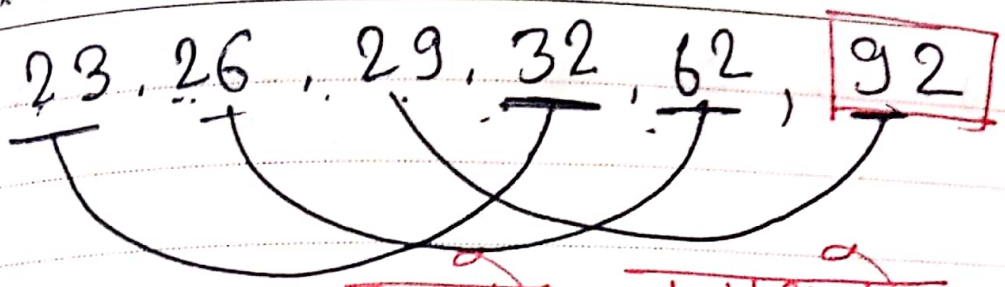
x1 x2 x3 x4 x5

15). 66, 36, 18, 8

6x6 3x6 1x8

Scanned with CamScanner

16) 23, 26, 29, 32, 62, 92



उल्टो बनाइको

17). # common difference types of series.

Q.) find the 100th term in the series.

2, 4, 6, 8, - - - - - 100th term

$a + (n-1)d$

a = 1st term
d = common difference
n = no. of term

$2 + (100-1) \times 2 = 2 + 99 \times 2$
$= 200$

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* 2, 4, 6, 8, ... 100th term

first term & common diff same
Q12, nth term = n × first term

i.e. 100th term = 2 × 100
= 200.

Q.2) 3, 6, 9, ----- 20th term

(3, 3)

⇒ 20 × 3 = 60.

~~Q.3)~~ # common ratio type of series

Q.1) 1, 5, 25, 125, ---- 50th term.

×5 ×5 ×5

Same ratio = 5

nth = ar^{n-1}

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a = 1st term
r = common ratio
n = no. of term

$50^{th} = 1 \times 5^{50-1}$

$= 5^{49}$

#.

Q.12). # continuous pattern series:

Q.1) a - ba - b - b - a - b

a) abaab
b) abbab
c) aabba
d) bbabb

a (b) b a (b) b a (b) b a (b) b

2) . — n m m n - m m n n _ m n n m -

a) n m m n
b) m n n m
c) n n m m
d) n m n m

3) r s r s
— t u - r t _ s — - u s r t u -

a) r t u s r u
b) r s u t r r
c) r s u r t r
d) r s u r t s

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Analogy (समरूपता)

1). Dog : Bark : : Goat : ?

a) Bleat
b) Howl
c) Grout
d) Bray.

2). Drama : stage : : Tennis : ?

a) court

3). Bank : River : : coast : ?

a) Flood
b) waves
c) sea
d) Beach

4). calf : cow : : puppy : ?

a) Dog
b) Bitch
c) Horse
d) Donkey

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number Analogy :-

1). 5 : 25 :: 6 : 36

2). 4 : 36 :: 3 : 27

x 9 x 9

3). 5 : 49 :: 8 : 100

5^2+2^2 $(8+2)^2$

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classification Test / odd one out

1). Find the odd one out:

a) ILO
b) UNDP - program. अरू संस्था हुन
c) WHO
d) FAO

2).

a) Giraffe
b) Hyena (मासु खाने)
c) Deer
d) Rhinoceros.

3).

a) mother
b) friend
c) sister
d) farther.

4). a) pound
b) yen
c) Ounce
d) Frame.

↓
unit अरू currency.

5). a). physics
b) chemistry
c) geography
d) Botany

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number classification

1). a) 17 (b) 27.
c) . 29 d) . 37.

2). (a) . 121 b) . 137
c) . 153 d) . 177

3) . a) 57 b) . 87
(c) 181 d) . 133
↳ prime no.

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Think Better - Write Good

#matrix

1).

6	6	8
5	7	5
4	3	? 8
120	126	320

$120 = (6 \times 5) \times 4$

$126 = 6 \times 7 \times 3$

$320 = 8 \times 5 \times 8$

2).

26	18	10
11.1	9	7
5.	4	1
10.	5	? ⇒ 2

$26 = 11 + 5 + 10$

$18 = 9 + 4 + 5$

$10 = 7 + 1 + 2$

3).

1	4	? (5)
4	2	5
2	2	3
49	64	169

$(1+4+2)^2 = 49$

$(4+2+2)^2 = 64$

$(5+3+5)^2 = 169$

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(3).

3	4	5
3	7	12
3	10	22

3+4=7+5=12
3+7=10+12=22

4).

28	60	48
5	6	7
14	39	27
7	27	16

(48-28)×3=60
(7-5)×3=6
(27-14)×3=39
(16-7)×3=27

5).

5	6	7
3	4	5
9	10	11
345	460	?

3(9×5)=345
4(6×10)=460
5(7×11)=577

⇒ 577

7).

9	A=9	12
13=B	10	7
8	C=11	11

A, B, C - value ?
row or col. ची sum equal होली
row, sum = 30.

a) A=13, B=11, C=9
b) A=13, B=9, C=11
c) A=9, B=11, C=11
d) A=9, B=13, C=11

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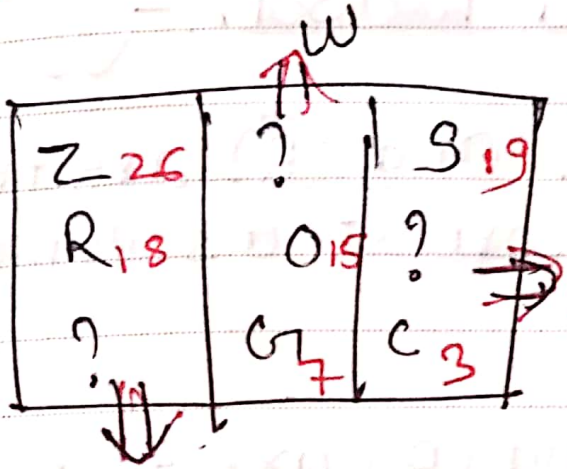
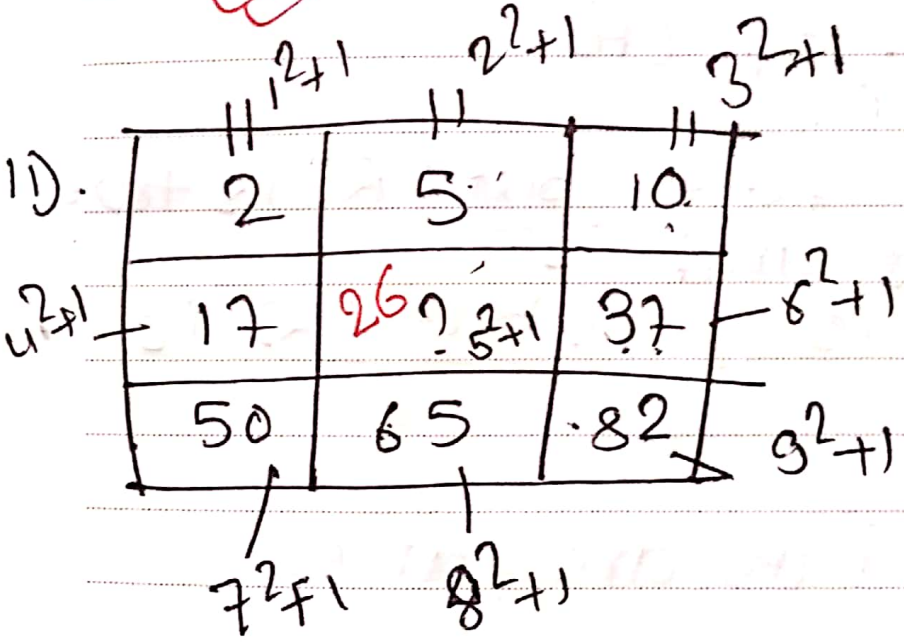
8). A D H
F +3 I +4 M
K ? +3 N +4 R.

10).



26-3=23(W)
~~3=~~
15-4=11(K)
7+3=10(J)

11).



~~Situation Judgement Test~~ :-

IMP

Assertion and Reason :-

A) If both (A) and (R) are true and (R) is the correct explanation of (A).

B) If both (A) and (R) are true but (R) is not the correct explanation of (A).

C). If (A) is false but (R) is true

~~D). If (A) is and (R~~

D). If (A) is false but (R) is true

E). If (A) and (R) are false.

Assertion (A): most of the Himalayan rivers are perennial

Reason (R): They are fed by melting stone.

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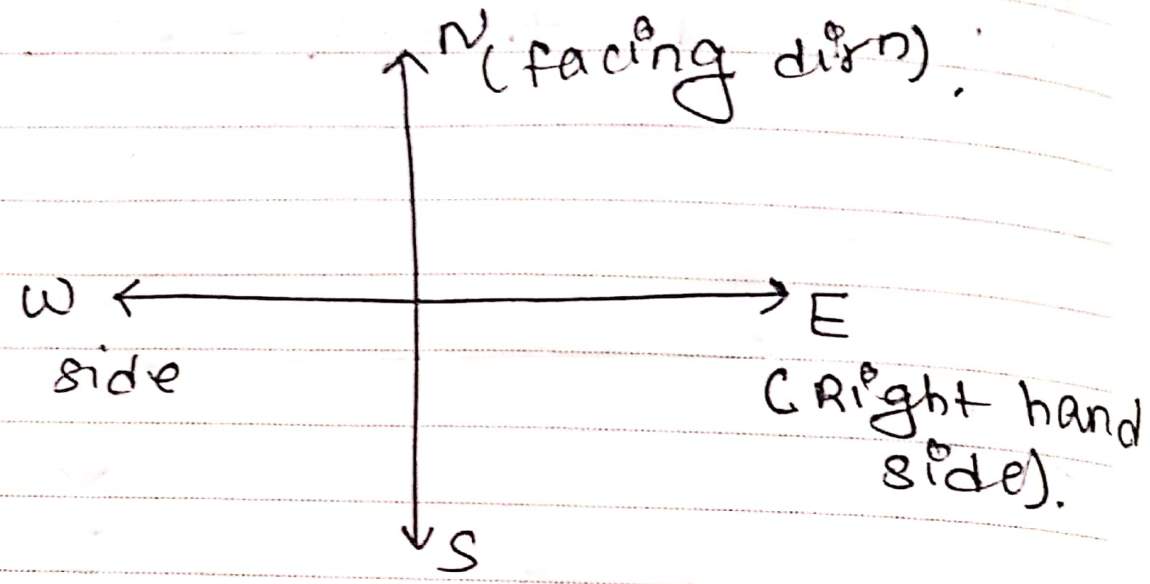
→ Reason ત્યારે રજૂ કરવા માત્ર ૬ મતને મળ્યો
મતે સહિ ચાલવા હુકમ , લાગુ થયેલ નહિ

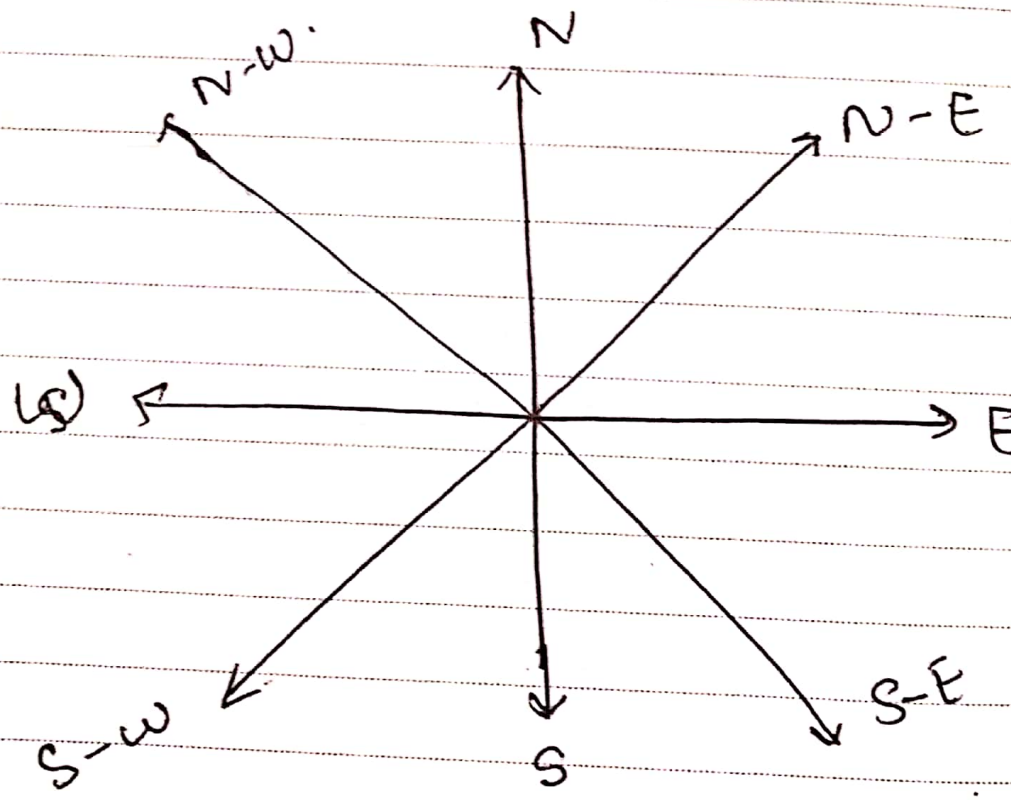
Imp # Direction And Distance

Think Better - Write Good

Type - 1



Type - 2



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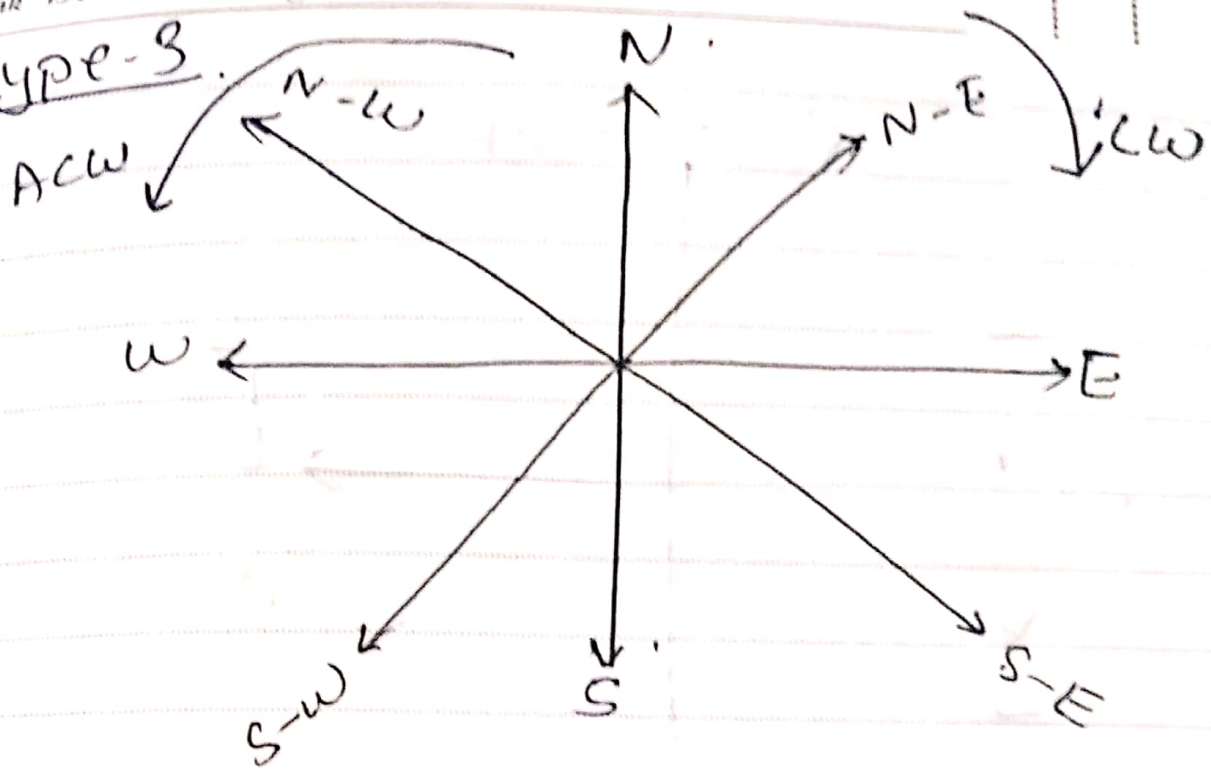
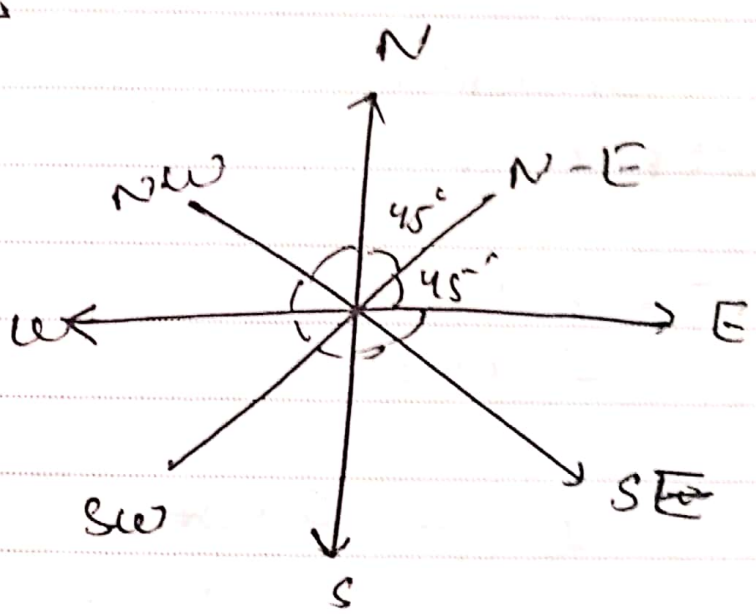
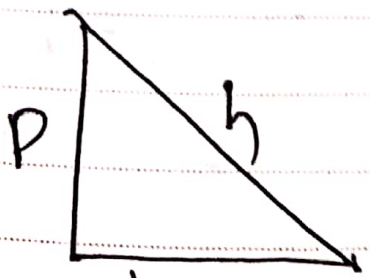
Type-3



Type-4



Type-5



$h = \sqrt{p^2 + b^2}$

3, 4 = 5

6, 8 = 10

12, 5 = 13

12, 9 = 15

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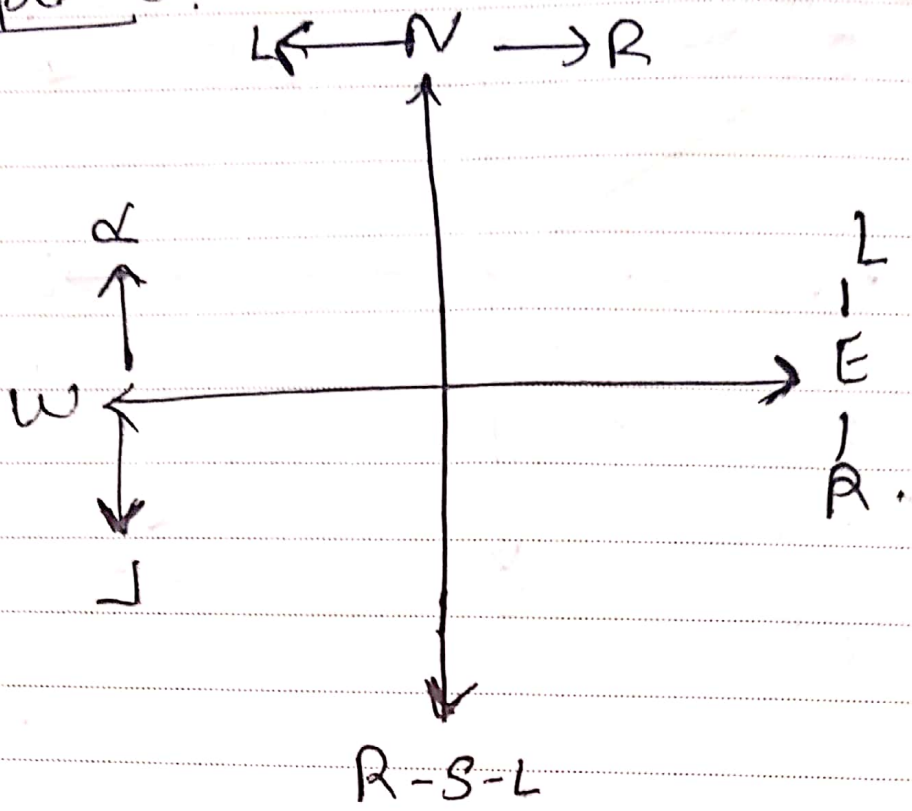
Type -6:



Type-7 : Shadow:

At morning,

सुर्य - East
छाया - west.

At Evening, सुर्य - west
छाया - East.

At noon,

घाम - टाउको माथी
छाया - At ground.

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Think Better - Write Good

यदि Ques मा कुनै पनि dirn दिइएको छैन भने always moves towards North.

Q.1) Ram walks 12km forward then he turns right & walk 5km. finally

i) in which dirn is he moving?

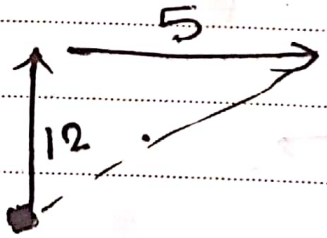
ii) In which dirn is he facing?

iii) How far is he from starting point?

iv) in which dirn is he from starting point.

Soln,,

If



i) moving towards East.

ii) facing - East.

iii) $\sqrt{12^2+5^2} = 13km$

iv) N-E

Q.2) Ram & Hari were walking towards opposite dirn, Ram walks 8km forward then he turns left & walks 6km. Hari walks 12km forward then turns left & walk 9km - finally:

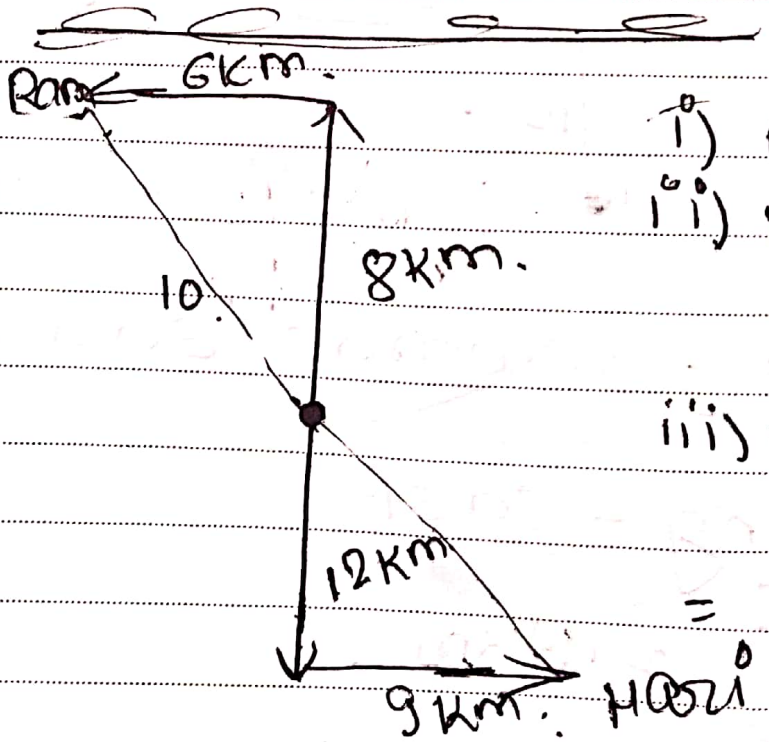
i) In which dirn is Ram from Hari?

ii) How far is Hari from starting point.

iii) Find the shortest distance betn Ram & Hari.

Soln,

dirn of G1, 1st person - north
2nd person - south



i) N-W

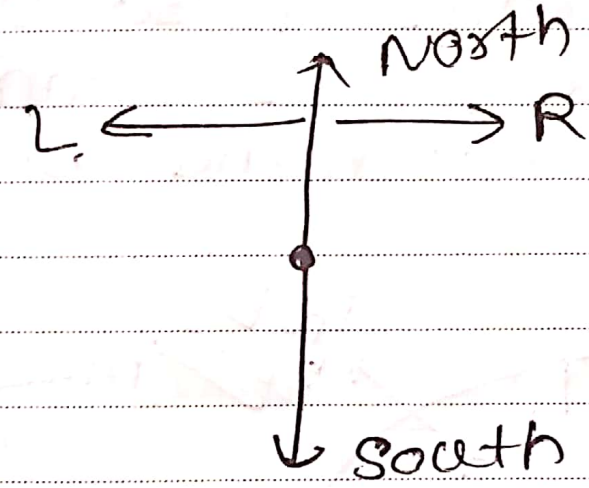
ii) $\sqrt{12^2+9^2}$
$= 15$km.

iii) $\sqrt{12^2+9^2}+10$
$= 25$km.

Q.3) Binod was performing yoga with his head down. If his face was facing towards south, then his Right hand would be.

Soln,

Note: दाउकोले टेकेर सम्बन्धी ques. सोधेमा अनुहारले जुन dirn देखाइद्द त्यसको विपरीत दिशाको दायाँ र बायाँ hand हुन्छ.

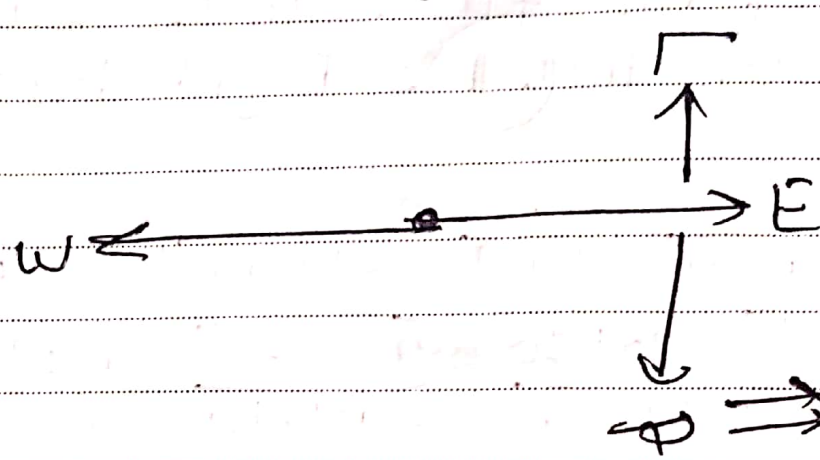


South अनुसारी North को Right, left हुन्छ।

i.e. Right hand is towards

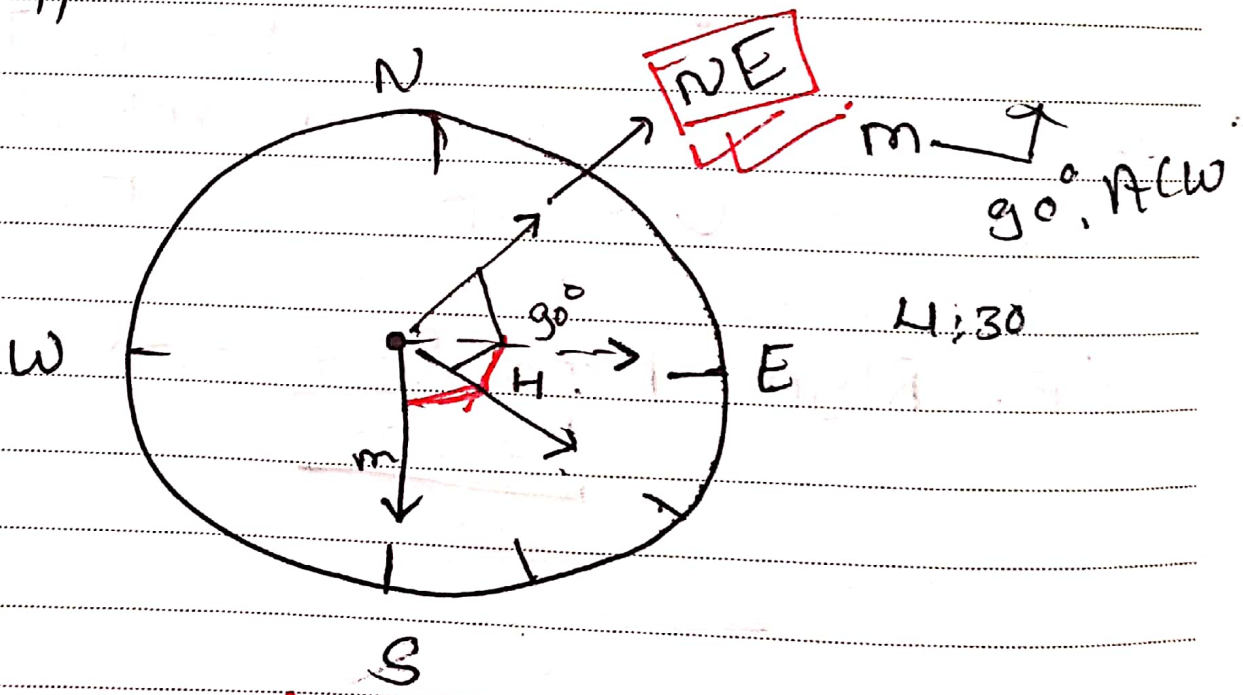
East

face facing towards west.



Q.4) A watch reads 4:30. If minute hand points towards East then, Hour hand be.

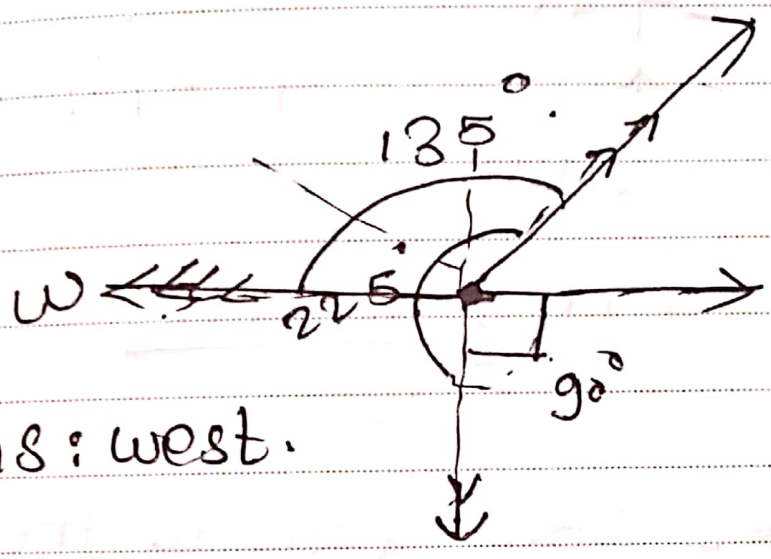
Sol^n,,



કોઈ પણ બાજુ degree ઘુમ્યુ અને બીજી બાજુ પણ એટલી degree same ઘુમ્યા હોય ઘુમ્યુ।

5). Binod was facing towards East then he turns 90° cw. Again he turn 225° cw & finally he turns 135° Acw dirn. Then in which dirn is he facing Now.

Soln.

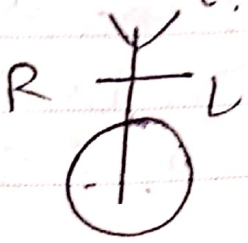


Ans: West.

6). One morning Ram and Hari were taking to each other face to face. If Hari's shadow was exactly to the right of Ram. Then in which dirn was Hari was facing.

Soln.

(Ram)



सुर्य

दिशा

पश्चिम

पूर्व

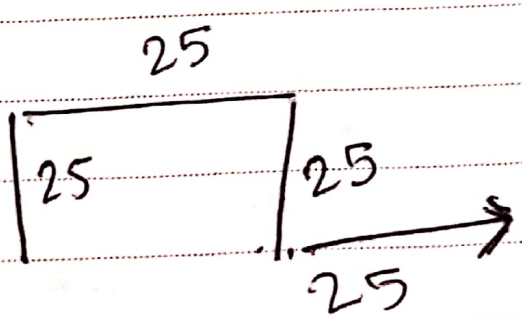
(morning में)

(Hari).

→ Hari is facing North.

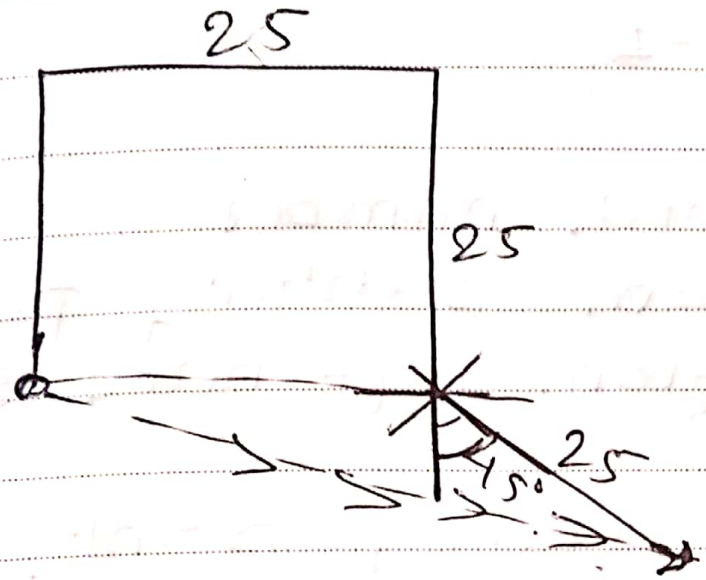
Q 7). Sita walks 25m forward then she turns right 90° and walk 25m again she turns right 90° and walk 25m. Finally she turns ~~25~~ left and walk 25m. Then, in which dirn is she from starting point

Soln,,



Ans: East

Left 45° भयो भने,



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Ranking order

$T = L + R - 1$

where,

T = total number

L = from starting point / from left hand side.

R = from ending point / from Right hand side.

Q.1). If $T = 35$, $L = 16$, $R = ?$

$T = R + L - 1$

$35 = R + 16 - 1$

$R = 20$ #.

2). In a row Ravi is 12th from left end & madhav is 7th from right end. There are 3 person in bet^n Ravi & madhav. Then find the total no. of (maxm no).

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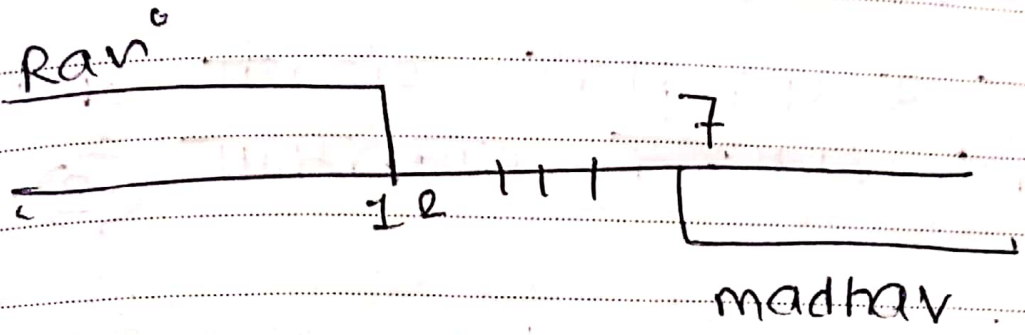
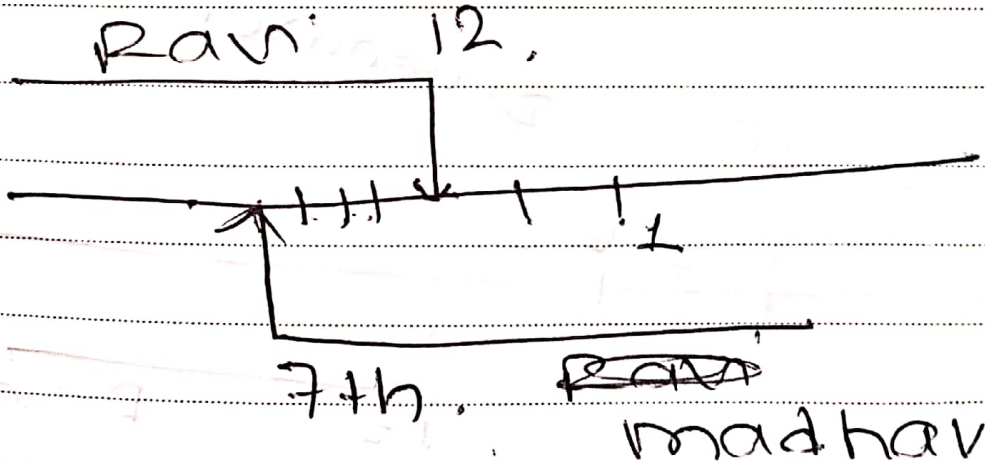
Soln.,



Total = 12 + 3 + 7 = 22.

Q.3). In a row Ravi is 12th from left end & madhav is 7th from right end. There are 3 person in betn Ravi & madhav. The find minimum number.

Soln,,



Ans = 12 + 2 = 14.

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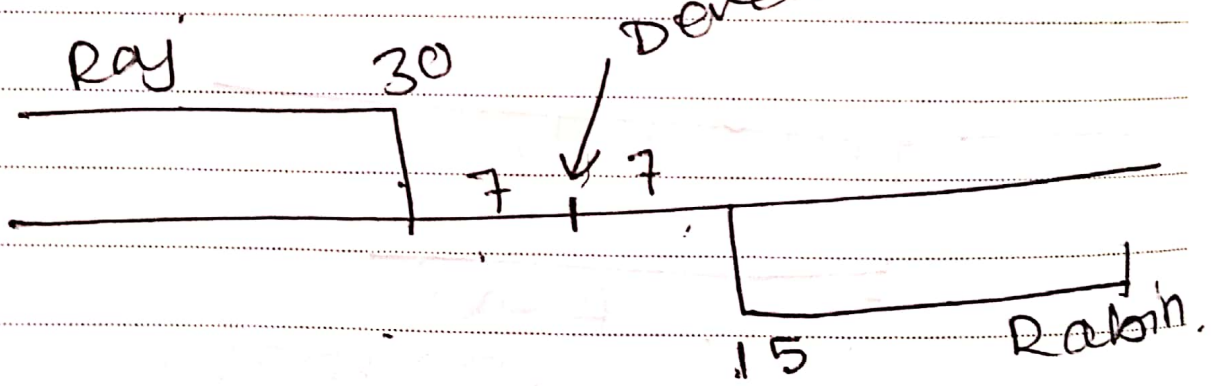
Note :- Minimum number

अगाडी र पछाडीको संख्या जोड्ने बीचको घटाउने, अन्तिममा (-2) गर्ने

two ota person अघर।

Q.4) In a Row of 60 boys Rabin is 15th from the right end, Raj is 30th from the left end. Devendra who is just in the middle of Rabin & Raj. Then find the Devendra's position from left end.

Soln,,

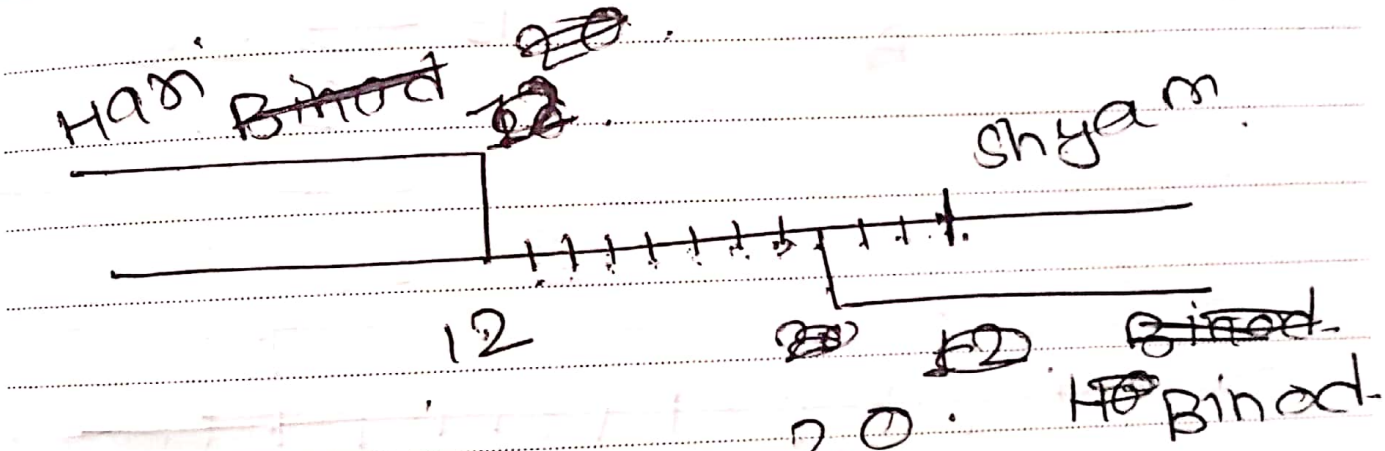


Devendra position = 30+7+1

= 38 from left

5). In a row Binod is 20th from right end, Hari is 12th from left end. Shyam who is 11th to the right of Hari and 3rd to the right of Binod. Then, find the total number.

Soln,,

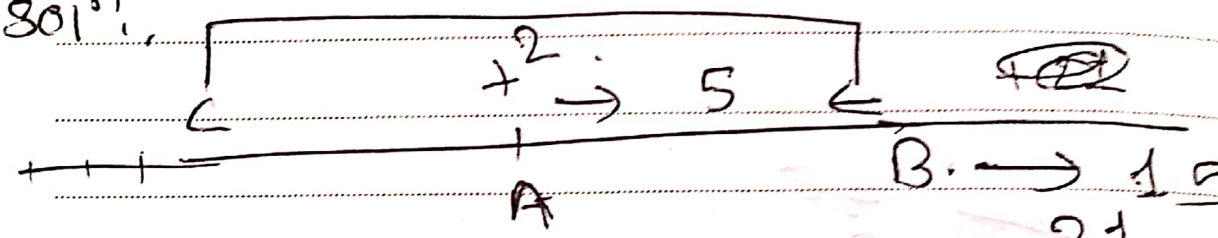


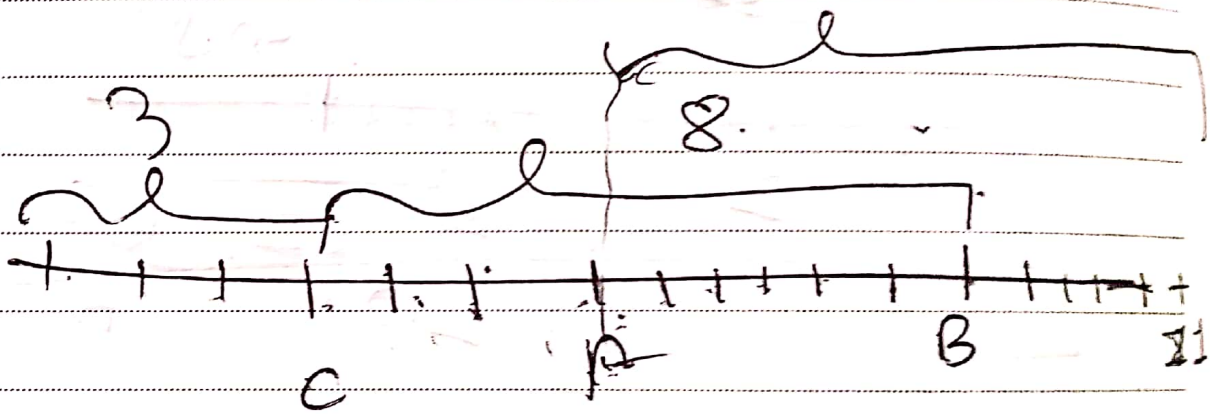
Total no = 12 + 7 + 20

= 39.

6) Three person A, B & C are standing in a queue, there are 5 persons in betn A & B. 8 person are in betn B & C. If three person ahead of C & 21 person behind A, then what could be the minm no. of persons in a queue?

Soln.

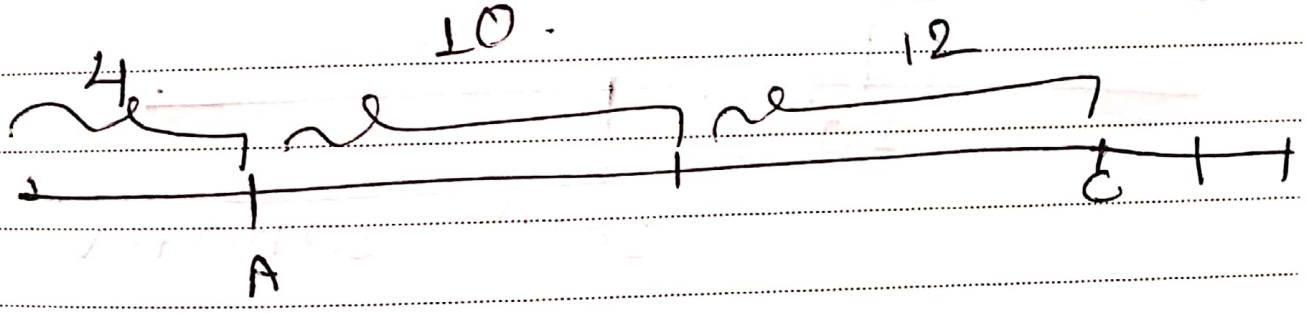




minm no. = 28.

7) 3 person A, B & C are standing in a queue, there are 4 person ahead of A. 10 persons are in betn A & B, 12 persons in betn B & C. 2 persons are in ~~bet~~ behind of C. Then, find the maxm no. of person in a queue.

Sol:-



$$\text{max}^{n} \text{ no} = 4 + 1 + 10 + 1 + 12 + 1 + 2$$

$$= 31.$$

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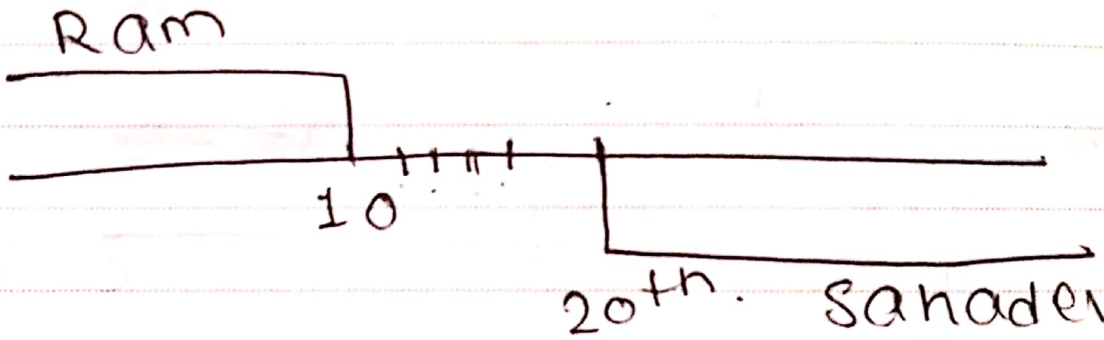
8) - In a row of boys, Ram is 10th from left, sahadev is 20th from right. The places of Ram and sahadev are interchanged. If the new position of Ram is 15th from left. Then the new position of sahadev from right is.

Soln:



After interchange,
position of sahadev = 25 from right.

Total no = 20 + 4 + 10 = 34.

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mirror & water Image:

* mirror Image:-

A B C D E

वस्तुको आकृती Mirror मा Right to left change हुन्छ।

A B C D E

Note: English Alphabet (11) वटा mirror मा परिवर्तन हुँदैनन्।

A H I M O T U V W X Y

Q.1) Find the mirror image of NEPAL.

a) NƎqAJ

b) NƎbAT

c) NEPAL

d) JAqƎN

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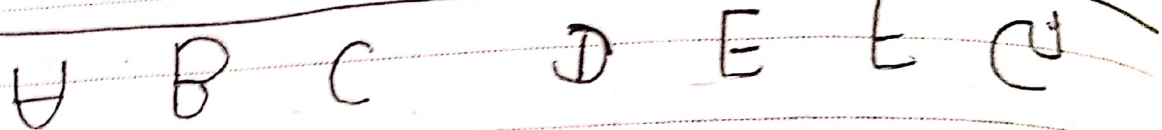
WATER Image :-

→ Top to bottom change हुन्छ ।

A B C D E F G



* 8 वटा Alphabet water मा परिवर्तन हुँदैन ।

C D E H I K X O

* ५ वटा water & mirror मा पनि change हुँदैन ।

H I O X

Q.) Find the water image of NEPAL.

a) ⅄∃9A⅃

b) ⅄E9Ⅎ

c) NEPAL

d) ⅃A9∃⅄

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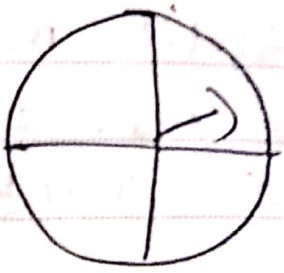
(x)



mirror

(water)

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~~Note~~: घडिको समय mirror मा पत्ता लगाउ भनेर ques. सोधेमा 11:60 बाट घटाउने

3:37

11:60
-3:37
8:23 → mirror

यदि 12:00 भन्दा बढि दियो भने 23:60 बाट घटाउने or 00 लेख्ने 12 लाई.

* WATER Image को लागी :-
100-1 time मिल्दैन 50 सोध्दैन।

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#percentage / profit & loss :-

Q.1) find 16.5% of 500.

10% = 50
5% = 25
1% = 5
0.5% = 2.5

16.5% = 82.5

Q.2) If 25% of a number is 400. Then find 40% of that number.

Soln:

let, x is no.

$\frac{25x}{100} = 400$

$x = 1600$

40% of 1600 = $\frac{40}{100} \times 1600$

= 640

#

Q.2). Ram's expenditure & saving are in ratio 5:3, if his income increase by 12% & expenditure by 15%, then how much percentage do his saving increase?

Soln:

$$\frac{E}{S} = \frac{5}{3}$$

$$E = \frac{5}{3}S$$

Income = 1.12I

Expenditure = 1.15E.

Saving = (1.12I - 1.15E)

Income	Expenditure		Saving
800	500	:	300
~~8 × 1.12~~	5 × 1.15	:	
= 8 + 12%			
= 96	75		
⇒ 896	575	:	321

896
-575
321

321 − 300 = 21

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$\frac{21}{300} \times 100 = 7\%$

Saving increase by 7%.

3). Salary of a person is increased by 20%. Then it is decreased by 20%, change in his salary is:

$x - y - \frac{xy}{100}$ ⇒ 1st increase then decrease.

⇒ $20 - 20 - \frac{20 \times 20}{100}$

$= -4\%$ ⇒ 4.

✱ process:

Assume, salary = 100

After 20% increase = 120

After 20% increase $= 120 - \frac{120 \times 20}{100}$

$= 96.$

Change $= 100 - 96$

$= 4$

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4). The salary of an employee is first increased by 20%. and then increased by 30%. Find the percent increase in his salary from original salary.

Sol:-

Assume, salary = Rs. 100.

After 20% increase = 120.

After 30% increase = $120 + \frac{120 \times 30}{100}$

= 156.

increase in %age = 56%.

$x + y + \frac{xy}{100}$

दूसरे time increase.

$20 + 30 + \frac{20 \times 30}{100}$

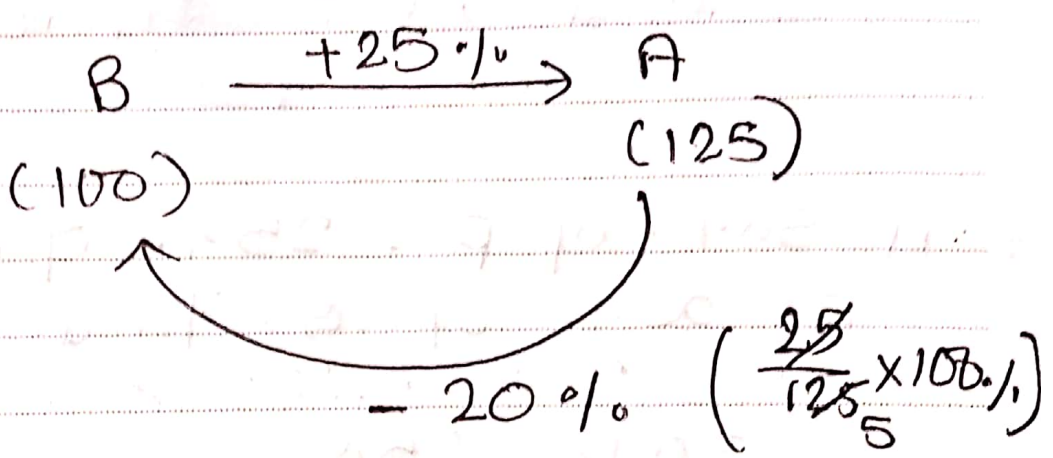
= 56

100 $\xrightarrow{+20\%}$ 120 $\xrightarrow{+30\%}$ 156

+20% +36%

5). A's salary is 25% more than B's salary, Then B's salary is how much less than A's salary?

Soln,,



6). 18% of which no. is equal to 12% of 75?

Soln.,

~~75% of~~

~~x% of~~

$12\% \text{ of } 75 = \frac{12 \times 75}{100} = 9$

$18\% \text{ of } x = 9$

$x = \frac{9 \times 100}{18} = 50.$

~~Ratio~~ :

$$\frac{\cancel{12} \times \cancel{75}}{\cancel{18}_{3}} = 50$$

% दिएको लाई multiply गर्ने, % दिएको पर्ने लाई divide गर्ने

7). If 50% of P = 25% of Q, then P = x% of Q. find x.

$$50P = 25Q$$

$$Q = 2P$$

$$1P = \frac{x}{100} \times 2P$$

$$\boxed{x = 50}$$

8). Difference betn 57% of a number & its 41% is 240. what is the no.

$$\frac{57x}{100} - \frac{41x}{100} = 240$$

$$16x = 24000$$

$$x = 1500$$

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9). A person spends 30% of monthly salary on rent, 25% on food, 20% on children education & 12% on electricity, and the balance of Rs. 1040 on the remaining items. what is the monthly salary of the person.

Soln.,

$$\frac{30x}{100} + \frac{25x}{100} + \frac{20x}{100} + \frac{12x}{100} + 1040 = x$$

$$87x + 104000 = 100x$$

$$x = \frac{104000}{13} = 8000$$

10). Given that 10% of A's income = 15% of B's income = 20% of C's income. If sum of their income is Rs 7800, then B's income is:

Soln.,

$$\frac{60A}{10\%} = \frac{60B}{15\%} = \frac{60C}{20\%}$$

L.C.M. = 60

$6A = 4B = 3C$

$A : B : C$

$6 : 4 : 3$

$B = 4 \times \frac{7800}{13} \quad (7800 \div 13 = 600)$

$= 2400.$

$A = 6 \times 600 = 3600$

$C = 3 \times 600 = 1800$

11). If 30% of A : 0.25 of B : $\frac{1}{5}$ of C,

the A : B : C is equal to:

$\frac{30\ A}{30\%} : \frac{30\ B}{25\%} : \frac{30\ C}{20\%}$

LCM = ~~150~~ 300

A : B : C

10 : 12 : 15

$\therefore A : B : C = 10 : 12 : 15$

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12). Sita buy's some pencils at 5 for a rupee and sell's them at 3 for a rupee. Her gain percent will be.

sol?.

buy			sell:		
RS 1	→	5	RS. 1	→	3
RS. $1/5$	←	1	RS. $1/3$	←	1

$$\text{gain} = \frac{\frac{1}{3} - \frac{1}{5}}{1/5} \times 100\% = \frac{2/15}{1/5} \times 100\%$$

$$= 66.67\%$$

$$= 66\frac{2}{3}\%$$

Trick.

रु. (1) = (5) वटा pencils

रु. (1) = (3) वटा

1 × 3 = 3 किंमती

1 × 5 वेळची

$$\text{profit} = \frac{3-5}{3} \times 100\% = \frac{2}{3} \times 100\%$$

$$= 66.67\%$$

$$= 66\frac{2}{3}\%$$

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13). on selling 17 pen at Rs. 720, there is a loss equal to the cost price of 5 pen. The cost price of one pen is

soln,,

$(17-5)$ की $cp = 720$

$12\ cp = 720$

$cp = 60$

14). A man, purchases 5 pen for a rupee. How many pens should he sell for a rupee if he wants to earn 25% profit?

soln,,

1 Rs. $\longrightarrow$ 5 pen

$\frac{1}{5}$ $\longleftarrow$ 1 pen

$1\ \text{pen} = \frac{1}{5} \times \frac{125}{100}^{25}_{4}$

$= \frac{1}{4}$

for Rs. 1 = 4 pens should sell.

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15). If the cost price of 18 articles is equal to selling price of 15 articles. Then gain is:

18 articles =

gain = 3 articles.

$= \frac{3}{15} \times 100$

$= 20\%$ gain.

formula: $\frac{x-y}{y} \times 100\%$

x = C.P, y = S.P

S.P.

16). By selling 4 articles a shopkeeper gains equal to the cost price of 1 article. Find his gain percent. C.P.

Sol^n,

$\frac{y}{x} \times 100\% = \frac{1}{4} \times 100\% = 25\%$

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17. If on selling 12 books, a seller makes a profit equal to selling price of 4 books. what is his percent profit.

Soln,,

लगानी = 8 वाले

4 वाले = profit.

$$\text{profit } \% = \frac{4}{8} \times 100 = 50\%.$$

formula : $= \frac{\text{S.P} - \text{S.P profit.}}{x-y} \times 100\%.$

C.P − S.P profit $\Rightarrow \frac{x-y}{y} \times 100\%.$

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Ratio / Average :-

Q.1) Find the ratio betⁿ 4 kg & 800g

$$= \frac{4 \times 1000}{800} = \frac{5}{1} = 5:1$$

2). Two numbers are in the ratio 3:5. If each number is increased by 10, the ratio becomes 5:7. The number are:

a) 3, 5 b) 7, 9

c) 13, 22 d) 15, 25

Sol^{n},,

$$\frac{3x + 0.3x}{5y + 0.5y} = \frac{5}{7}$$

$$\frac{3 : 3x}{5.5y} = \frac{5}{7}$$

$$\frac{x}{y} = \frac{3}{5}$$

$$x = \frac{3}{5}y.$$

$$3 : \frac{3}{5}x$$

$$\frac{3x + 10}{5x + 10} = \frac{5}{7}$$

$$21x + 70 = 25x + 50$$

$$4x = 20$$

$$x = 5,$$

$$\begin{cases} 3x = 15 \\ 5x = 25 \end{cases}$$

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TRICK :-

1st लाई 3 ले भाग जाने र 2nd लाई सेम्रो 5 ले भाग जाने हुने।

a) 3, 5
+10 , +10
13, 15

d) 15, 25
+10 +10
25, 35
5 : 7
ए.

35. The average age of 20 boy's in a class is 12 years. what will be average of the class if 5 new boys take admission whose average is 7 years.

Soln,

$$\frac{20\times12+7\times5}{25} = \frac{240+35}{25}$$

$$= \frac{275}{25}$$

$$= 11 \#$$

4. The average of 11 numbers is 50. If average of first six numbers is 49 and that of last 6 no. is 52. Then, the 6th no. is.

Soln,

$$11 \times 50 = 550 \quad \text{(total)}.$$

first 6, $6 \times 49 = 294$

Last 6, $+\ 6 \times 52 = 312$

606

$$606 - 550 = 56$$ — repeat भएको no. (6th).

5. The average age of 40 students in a class is 15 years. If the age of teacher is also included, the average becomes 16 years. find the age of the teacher.

Soln,

$$\frac{40 \times 15 + 1 \times x}{41} = 16$$

$$x = 16 \times 41 - 40 \times 15$$

$$x = 56 \text{ yrs}$$

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6). 16 litres of mixture contains milk and water in the ratio 5 : 3. If 4 Litres of milk is added to this mixture, the ratio of water to milk in the mixture would be:

Soln//

$$\frac{\text{milk}}{\text{water}} = \frac{5}{3}$$

milk = 10 litre

water = 6 litre.

milk added = 4 litres.

now, milk : 14 litre

water = 6 litre.

Total 20.

ratio: $\frac{\text{water}}{\text{milk}} = \frac{6}{14} = \frac{3}{7}$; 3:7

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7). A bag contains rupees, 50 paisa & 25 paisa coins in the ratio 5:6:8. If the total amount is Rs 420. Find the number of 25 paisa coins.

Soln

$\frac{50 \text{ paisa}}{25} = 5$

1R : 50p : 25p = 5 : 6 : 8

$(5 + 12 + 32)x = 420$

$x = \frac{420}{47}$

no. of 25 paisa $= 8 \times \frac{420}{47} \times \frac{1}{4}$.

4 × 25p : 2 × 25p : 25p = 5 : 6 : 8

$(4 \times 25p)5 + (2 \times 25p) \times 6 + 25p \times 8 = 420$

$(20 + 12 + 8) \times 25p = 420 \times 4$

$25p = \frac{420 \times 4}{40}$

$= 42$

A = 1 rup.
B = 50 pai'sa
C = 25 pai'sa.

$= \frac{cz}{ax + by + cz} \times$ total amount

$= \frac{25 \times 8}{100 \times 5 + 50 \times 6 + 25 \times 8} \times 420$

$= \frac{200}{500 + 300 + 200} \times 420$

$= \frac{420}{1000} \times 200$

$= 84$ RS.

25 पैसाको सिक्का $= 84 \times 4$
$= 336$

50 paisa coin:

no $= \frac{by}{ax + by + cz} \times$ total amount

$= \frac{6 \times 50}{1000} \times 420 \times 2$

$= \frac{300}{1000} \times 420 \times 2 = 252$

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8). A cricket player after playing * 10 tests scored 100 run in the 11th test as a result the average of his runs is increased by 5. The present average of runs is:

soln

$$10x + 100 = 11(x+5)$$

$$10x + 100 = 11x + 55$$

$$x = 45$$

present average run = 50

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Time and work:

Direct		Indirect	
માણસ	મજૂરી	men	Day.
50	100	10	20
100	200 (x)	20	10 (x).
25	50	5	40

$\frac{x}{100} =$

$x = 100 \times \frac{100}{50} = 200$

$x = 20 \times \frac{10}{20}$

$= 10.$

x ની સાથે ચાર્ટ કોના two વધ્યા એટલે ઉલ્ટો સંબંધ માંથી બીજો અને એક સાનો સંબંધ માંથી બીજો

1). 30 people can do a work in 20 days. To finish the work in 10 days, how many people can be added.

people	Day
30	20
x	10

$\frac{x}{30} = \frac{20}{10}$, $x = \frac{20}{10} \times 30 = 60$

no. of people to be added = 30

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2). Running at the same constant rate 6 identical machine can produce a total of 270 bottle per minute. At this rate, how many bottles could 10 such machines produce in 4 minute?

Soln,

no. of machine	bottle.	minute.
6	270	1
10	x	4

$$x = 270 \times \frac{10}{6} \times \frac{4}{1}$$

$$x = 1800$$

3). A is 30% more efficient than B. How much time they will take to complete a work together if same work is done by A in 23 days.

Soln,

A ⟶ 23 days

100 B ⟶ x

$$x = 23 \times \frac{130}{100}$$

$$230(A+B) = ?(x)$$

$$x = 13 \text{ days}$$

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4). A & B can complete a work in 8 days B alone can do it in 12 days while working together after 4 days B left, in how many days A will finish remaining work?

Sol^n,

(A+B) = 8 days
B = 12 days

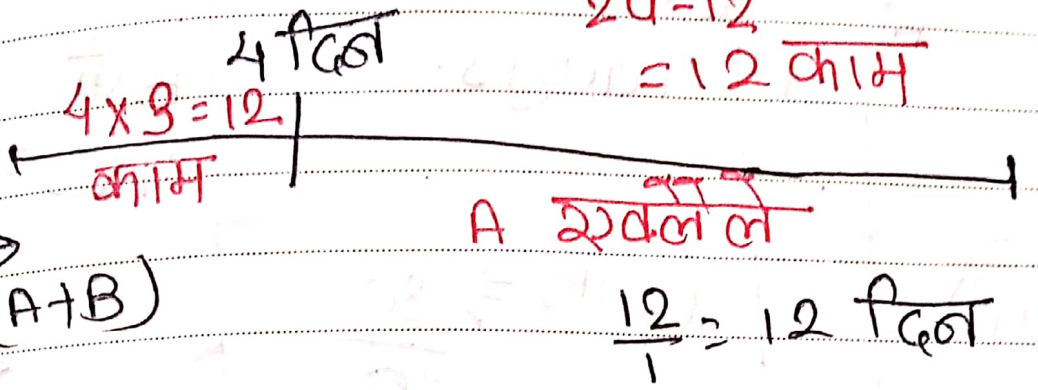
L.C.M. 24 जम्मा काम

(A+B) ले 1 day मा गर्ने काम = $\frac{24}{8}$ = 3

B ले 1 day मा गर्ने काम = 2
A ले 1 " " " " = 3-2 = 1

सबैको प्रतिदिन काम गर्ने.

A एक्लैले 24 दिनमा गर्थ्यो त्यो काम



$\frac{12}{1}$ = 12 दिन

∴ A will finish remaining work in 12 days.

पुरै काम सकिन लाग्ने दिन = 12 + 4
= 16 दिन

Q.5). A, B & C can complete a work in 24, 36 and 48 days respectively. They started together but C left after 4 days, A left after 3 days before completion. In how many days the whole work can be done.

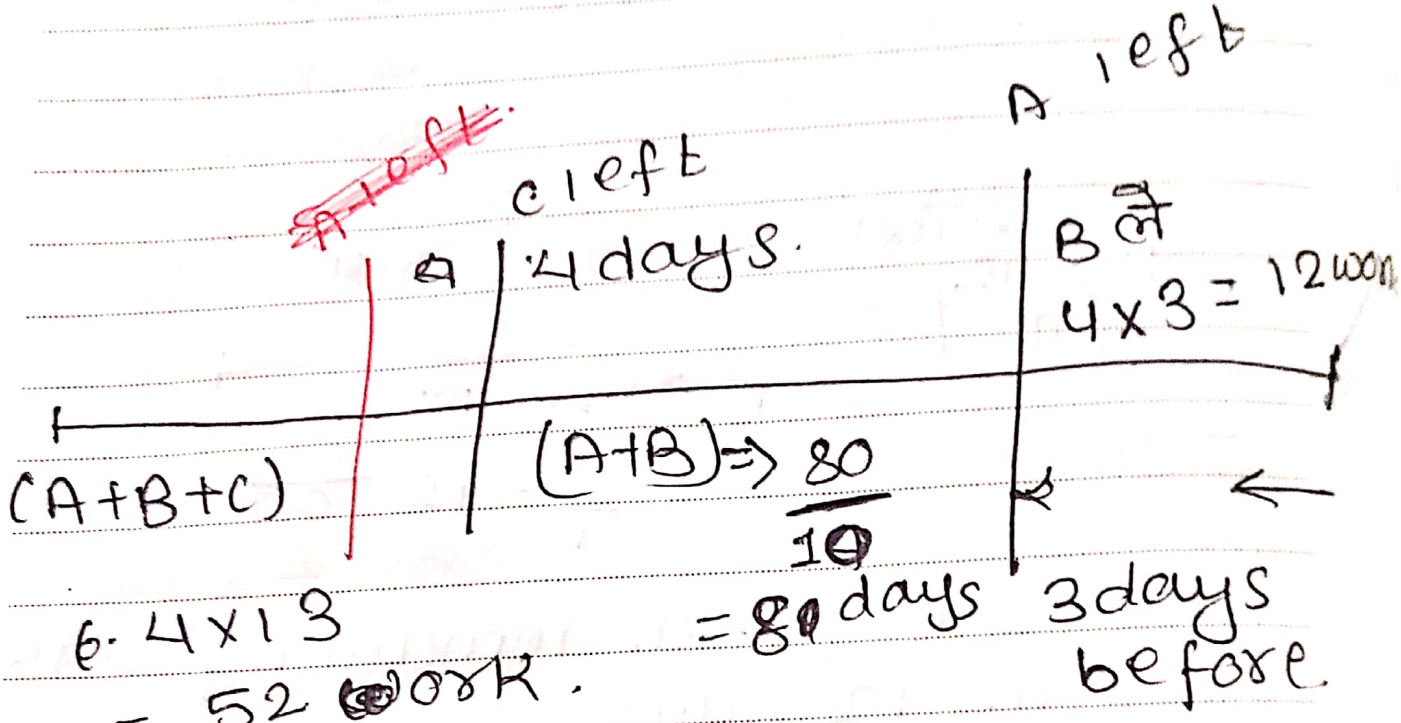
Soln,,

1 day - 6 ~~dday~~
1 day = 4
1 day = 3

A → 24
B → 36
C → 48

L.C.M 144 (total work)

13 (A+B+C)



6. 4 x 13
= 52 work.

144 - 52 = 92 - 12 (B ~~अकेला~~ ले).
= 80 work
(A+B)

Total days to do work
= 4 + 3 + 8
= 15 days.

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6). A fort has provided of food for 150 men for 45 days. After 10 days 25 men left the fort the number of days for which the remaining food will last is.

Soln,,

• जम्मा संख्या × बाँकी दिन
बाँकी रहेका मानिसको संख्या

$$= \frac{150 \times 35}{125}$$

$$= 42 \text{ days.}$$

7). 2 men ~~of~~ 4 women can do a work in 28 days. How long will 4 men and 8 women take to complete the work?

Soln,,

M	W	D
2	4	28
4	8	x

$$x = 28 \times \frac{4}{8} \times \frac{2}{4} = 28 \times \frac{1}{2} \times \frac{1}{2}$$

$$= 7 \text{ days.}$$

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8). 3 men + 4 women = 5 days,
4 men + 3 " = 4 days, then
2 men + 3 " = ?

Soln"

3m + 4w = 5D.
4m + 3w = 4D.

5 x 3m + 4 x 5w i.e.

15m + 20w
16m + 12w

1m ± 8w (Days).
Time.
(effecieney, काम).

8m 1w

i.e. women को 1 काम वाही men को 8 काम वाहे।

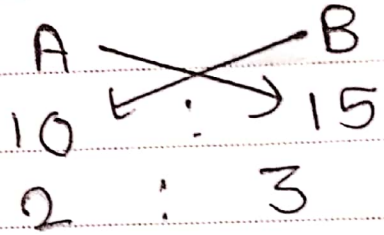
15 x 8 + 20 x 1 = 120 + 20
= 140 (Total work).

(m) (w)
2 x 8 + 3 x 1 = 19 work.

$\Rightarrow \frac{140}{19}$ days.

9. A & B can complete a piece of work in 15 days and 10 days respectively. They contracted to complete the work for Rs 30,000. The share of A in the contracted money will be:

Soln,,



$\frac{2}{5} \times 30000 = 12,000$ (A ले).

10. P & Q can do a piece of work in 18 days. Q and R can do it in 24 days. P & R can do it in 36 days. In how many days will, P, Q & R finish it.

Soln,,

4 (P+Q) → 18
3 (Q+R) → 24
2 (P+R) → 36

→ 72 / 9 = 8 days

9 (P+Q+R)

∴ 8 × 2 = 16 days

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P, Q, R सबै 2/2 वटा भएकोले
last मा x2 गर्नुपर्छ।

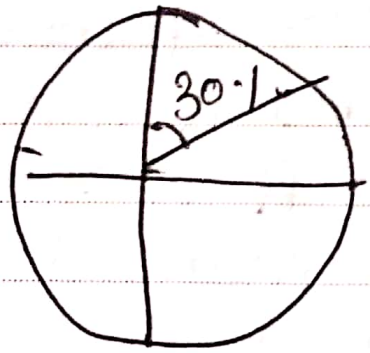
Data Interpretation :-

Total number / जम्मा संख्या > ques मा हुन्छ।

जम्मा डिग्री - 360°
जम्मा % - 100%

pie-chart

$$\frac{\text{निकाल्नुपर्नेको पुरै}}{\text{परिवर्तन गर्नुपर्नेको पुरै}} \times \text{कति}$$



$$\frac{360}{100} \times 30$$
$$= 108^\circ$$

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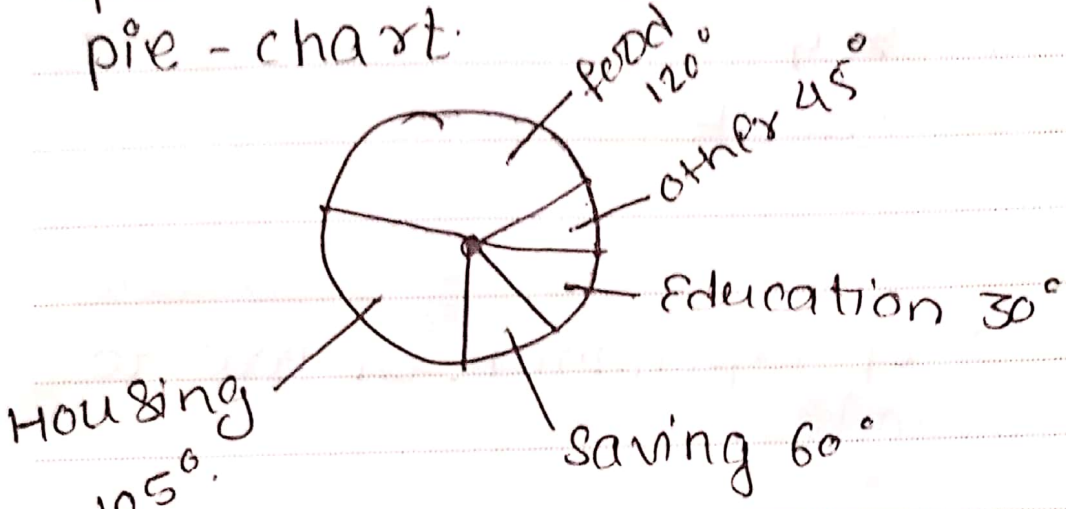
1). The pie chart given here shows the expenditures incurred by a family on various items and their saving, which amount to 8000 in a month. Study the chart and answer the questions number based on the pie-chart.



1). what is the total expenditure of the ~~follo~~ month?

Soln,,

$$60^\circ = 8000$$

$$1^\circ = \frac{8000}{60}$$

$$\text{Expenditure} = \frac{8000}{60} \times 300^{5}$$

$$= 40000$$

2) How much more amount is spent on food as than on Housing?

$$= \frac{8000}{60} \times (120 - 105)$$

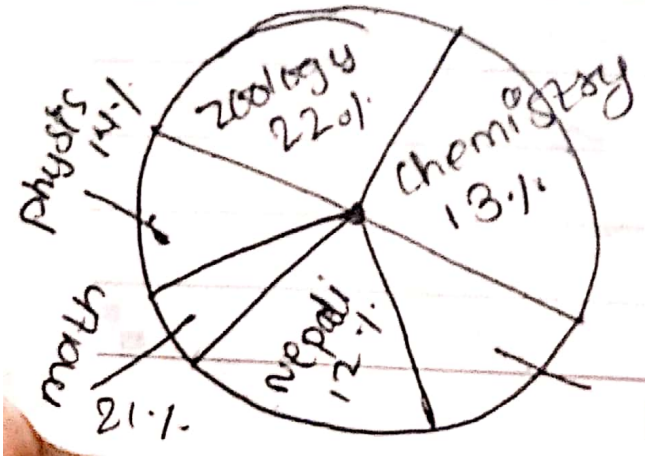
$$= \frac{8000}{60_4} \times 15$$

$$= 2000/-$$

3). The ratio of expenditure on food to the saving?

$$\frac{120}{60} = 2:1$$

Q.2). percentage wise distribution of Lectures / Ratio of male to female lectures in 6 different subjects in a University total number of lectures 1600.



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Lectures	male : females
mathematics	3:4
education	8:3
nepali	1:3
chemistry	1:7
physics	9:5
zoology	7:9

soln,

nepali = $\frac{1600}{100} \times 12 = 192 \Rightarrow$ M - 48, F = 144.

chemistry = $\frac{1600}{100} \times 13 = 208 \Rightarrow$ M - 26, F - 182.

zoology = $\frac{1600}{100} \times 22 = 352 \Rightarrow$ M - 154, F - 198

physics = $\frac{1600}{100} \times 14 = 224 \Rightarrow$ M - 144, F - 80

Education = $\frac{1600}{100} \times 18 = 288 \Rightarrow$ M - 180, F - 108

mathematics = $\frac{1600}{100} \times 21 = 336 \Rightarrow$ M - 144, F - 192

a) Total no. of lectures both male & female in nepali is approx. what % of the total no. of female lectures in ~~materie~~ mathematics & chemistry together.

$$\Rightarrow \frac{192}{192+182} \times 100\%$$

$$= \frac{192}{374} \times 100\%$$

$$= 51.33\%.$$

* what is the total no. of male lectures in the university.

$$= 48+26+154+144+180+144$$

$$= 360+48+288$$

$$= 408+288$$

$$= 696.$$

Bar Graph :-

A watch company produces four different products. The sale of these products in lakes during 2005 and 2010 are shown in the following bar diagram. Study the graph and answes the question.

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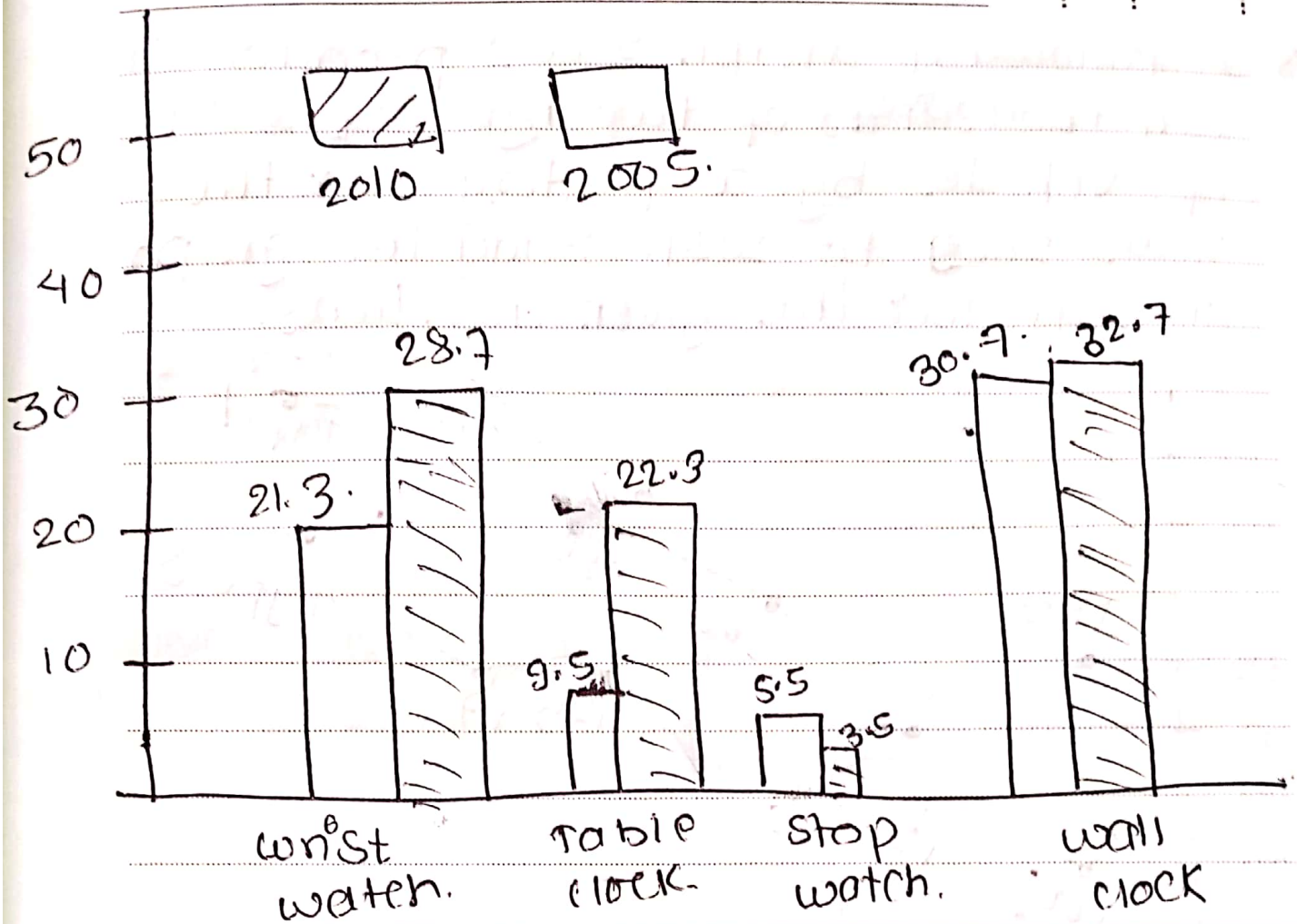

D. The sale in percentage of wrist in 2010 more than the sales of table clock in 2010 was nearly by.

Soln,

$$\frac{28.7 - 22.3}{22.3} \times 100\% = 28.7\%.$$

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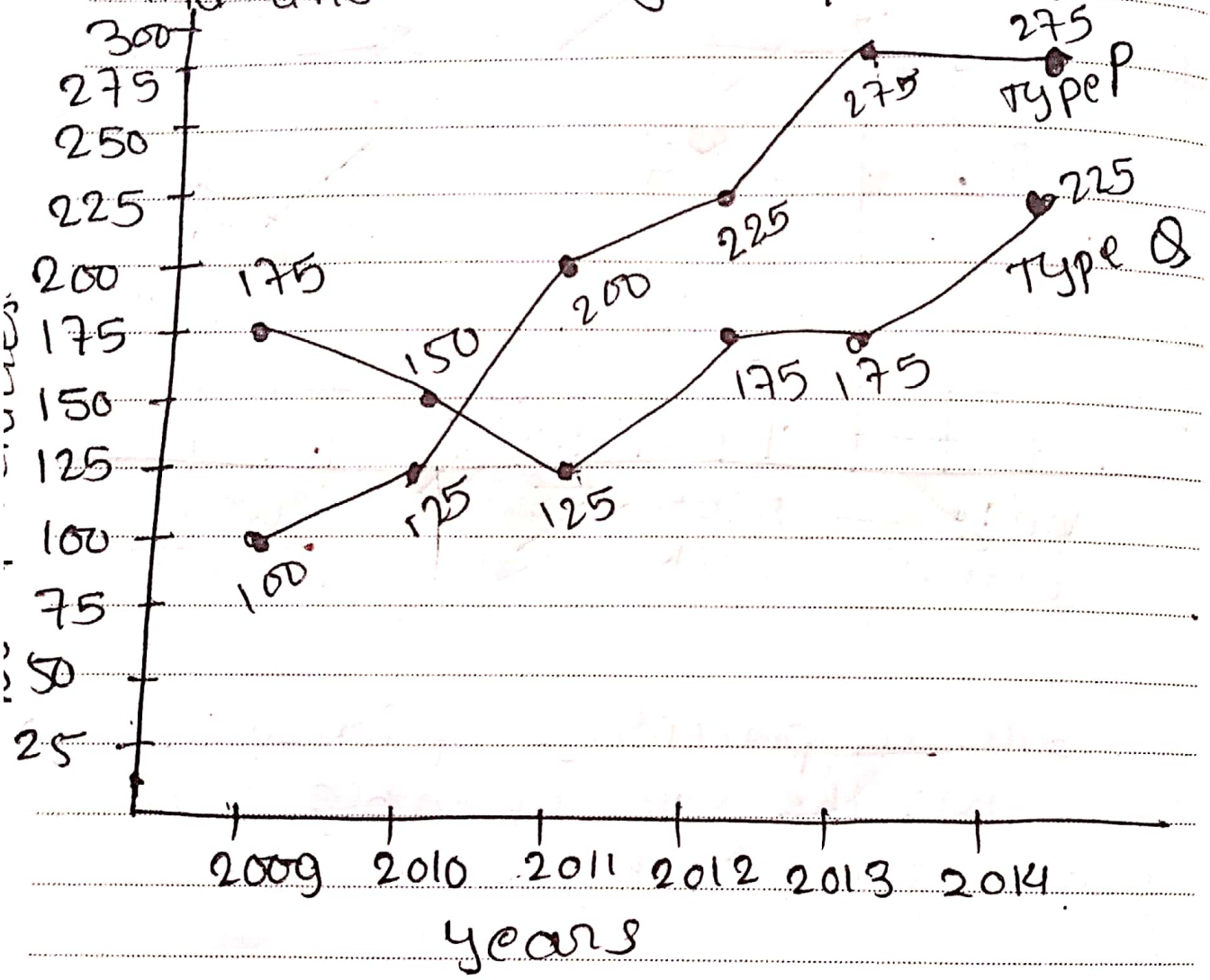
Q.1). following graph shows production (in thousand) of two type (P & Q) of vehicles by x factory over the years 2009 to 2014. Study the graph and answer the given questions.



a). In how many of the given years was the production of type 'P' vehicles of the company more the average production of this type vehicles in the given year?

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Soln

$$\frac{100+125+200+225+275+275}{6}$$

$$= 200$$

i.e. 2012, 2013, 2014 (3).

b. The ratio of total production of type P vehicles to total production of type Q vehicles over this year

Soln

$$= \frac{(100+125+200+225+275+275)}{(150+125+175+175+225)}$$

$$= \frac{1200}{925}$$

$$=$$

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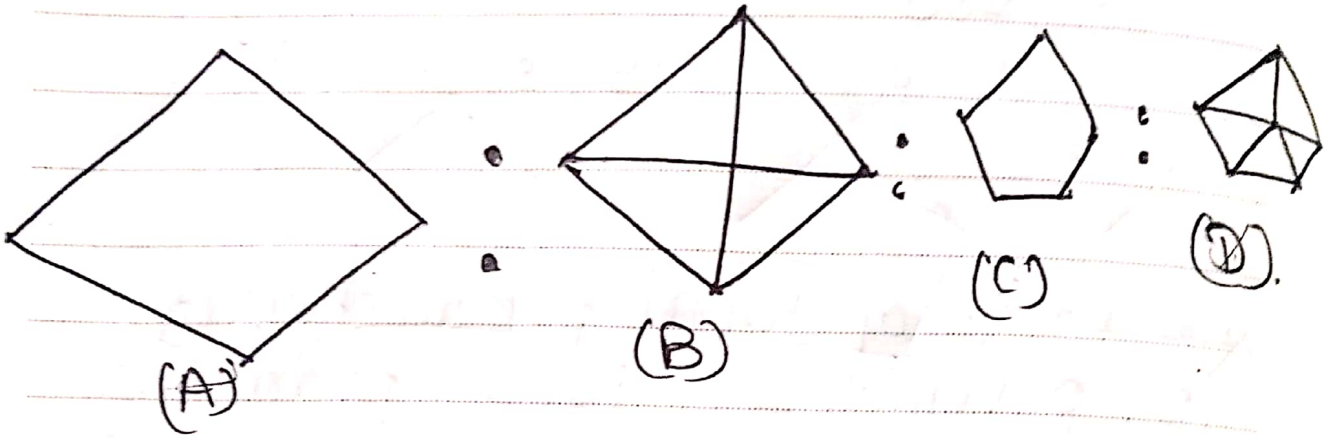
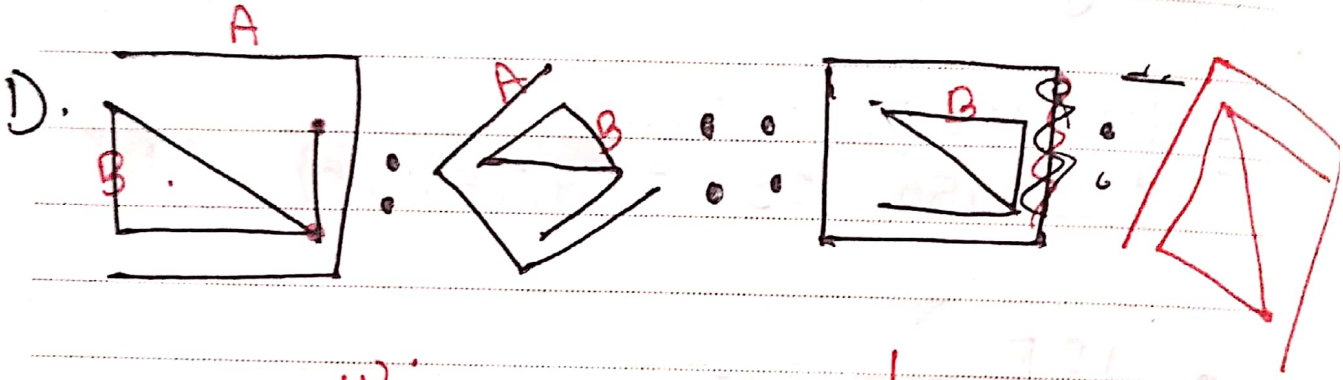
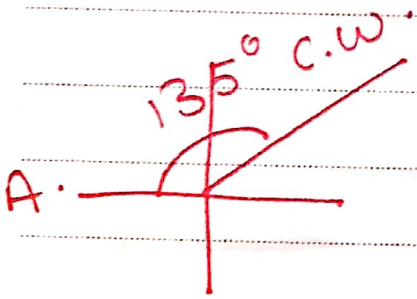
Part III

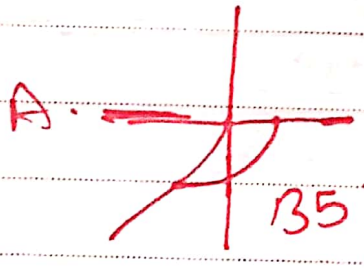
Figure Analogy :-

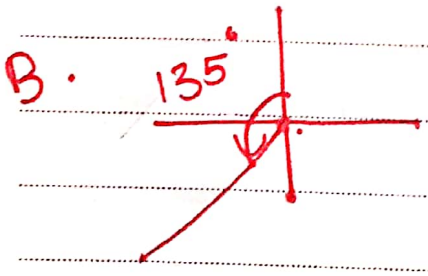


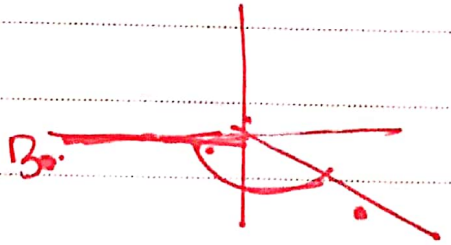
D.











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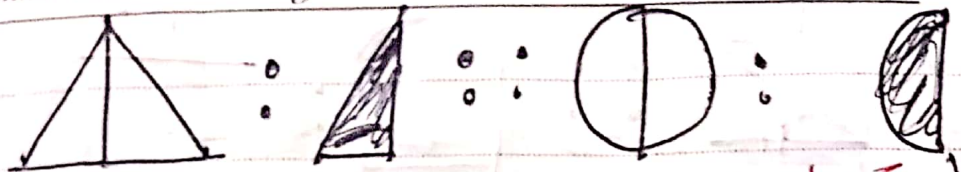
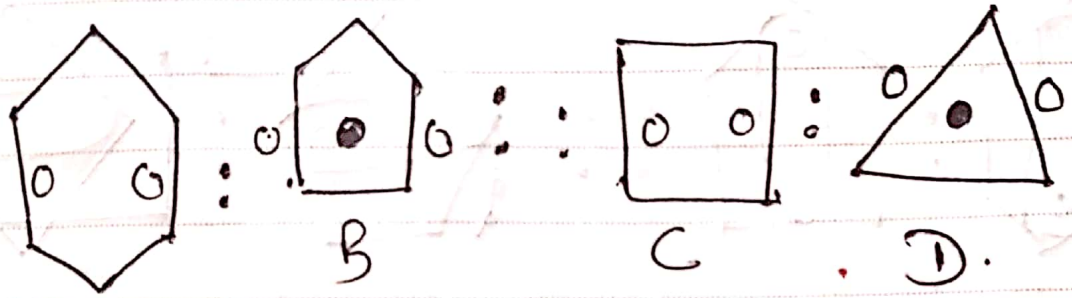
2).



A B D.

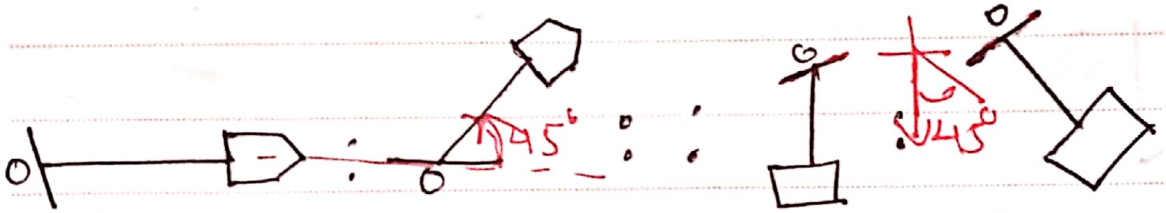
3).



A. B C D.

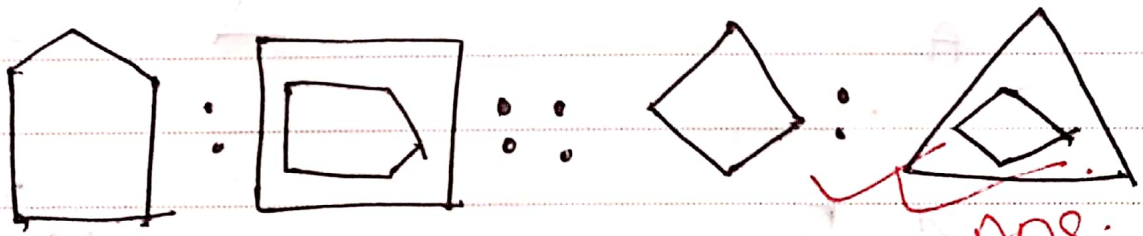
Ans.

4)



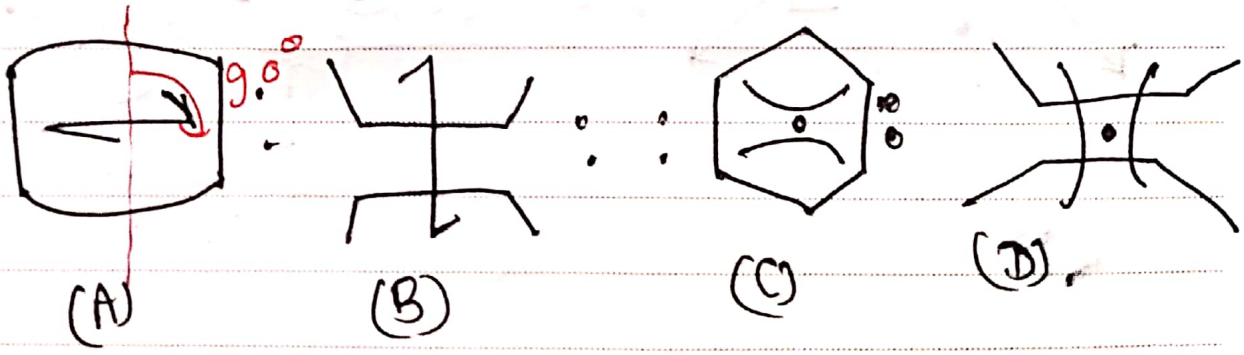
(A) (B) (C) (D).

5).



Ans.

6).



(A) (B) (C) (D).

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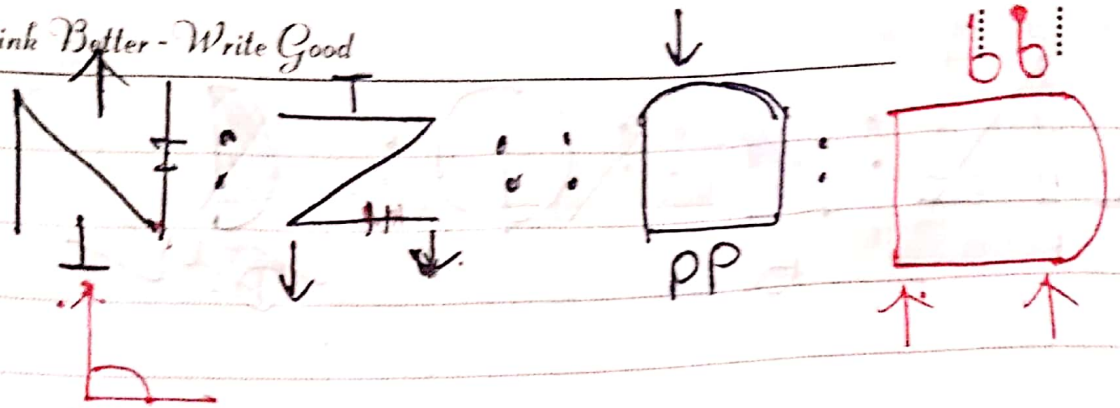
7).



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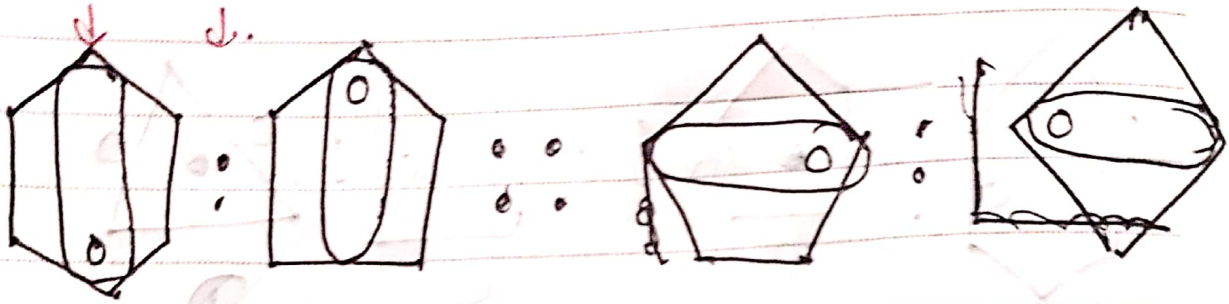

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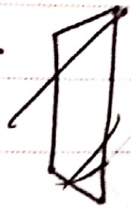

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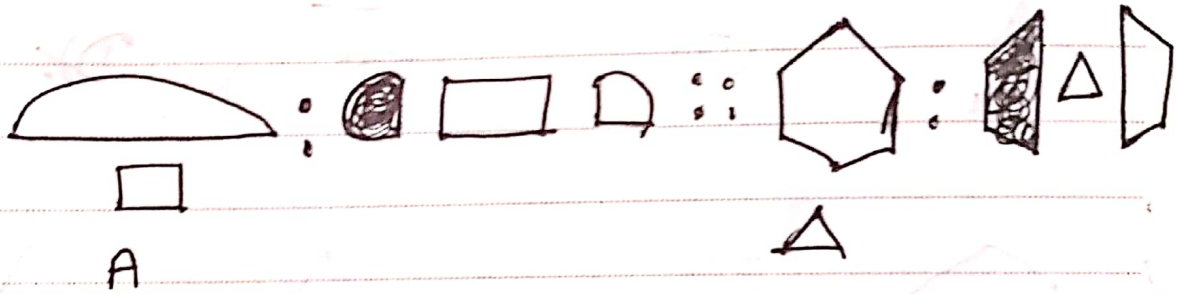

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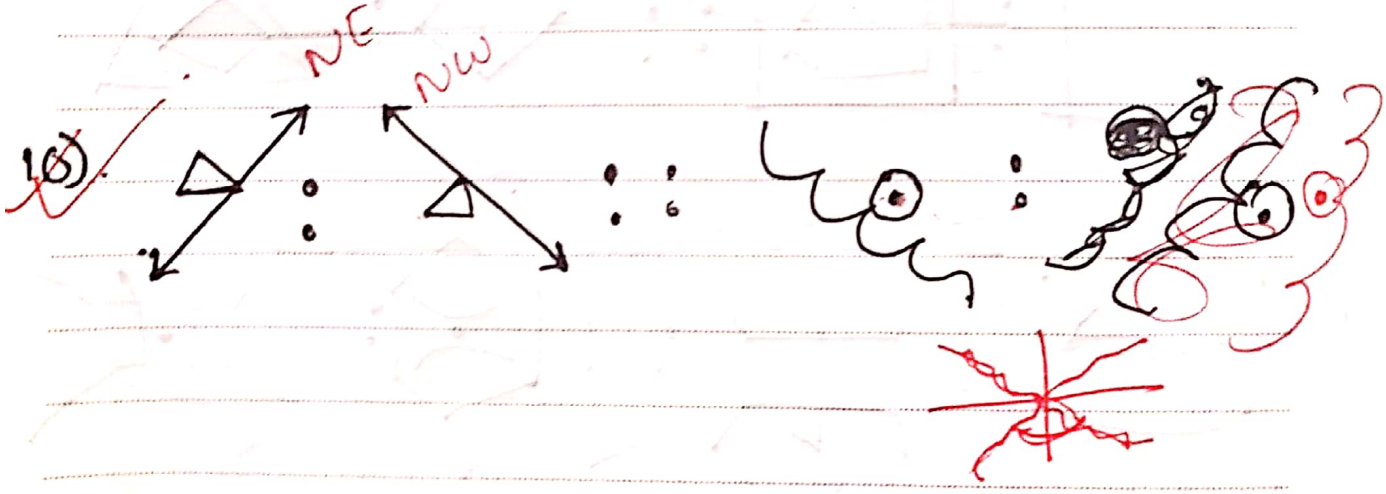

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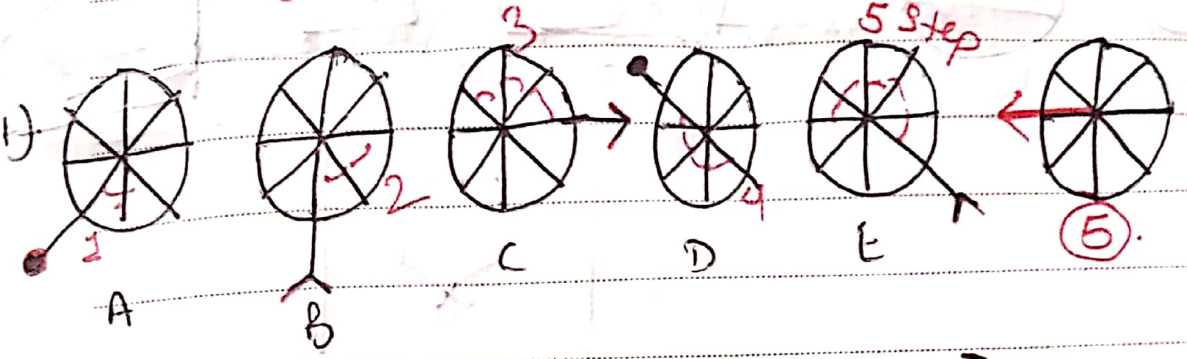
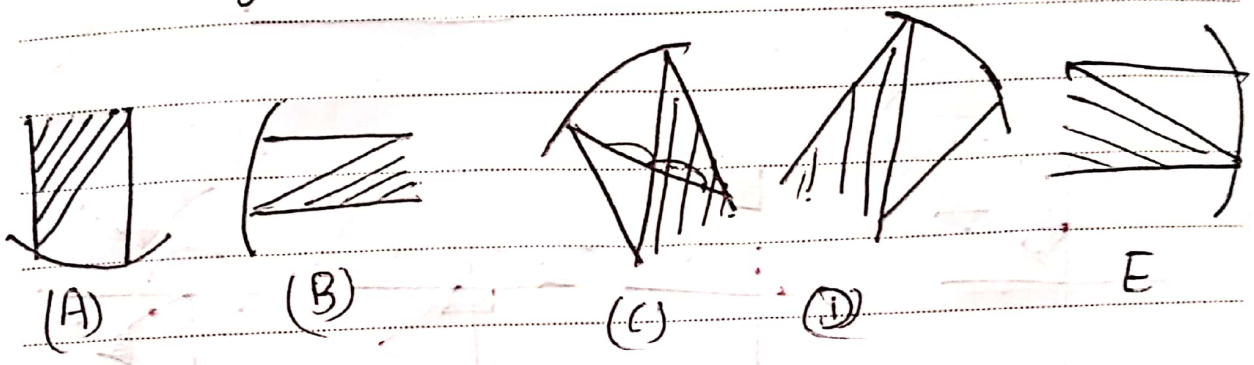
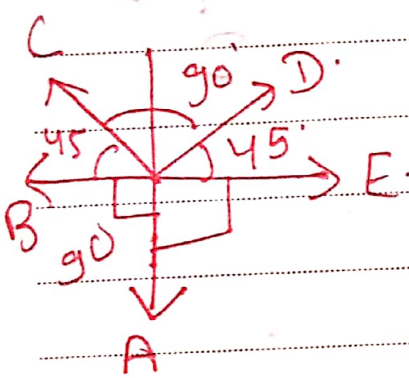
Figure series

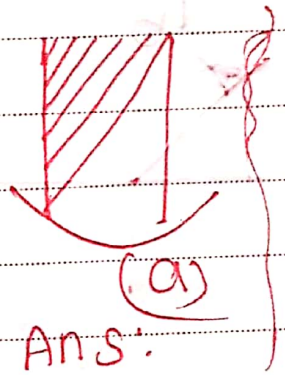
1)

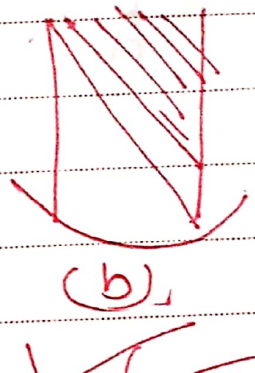


2).









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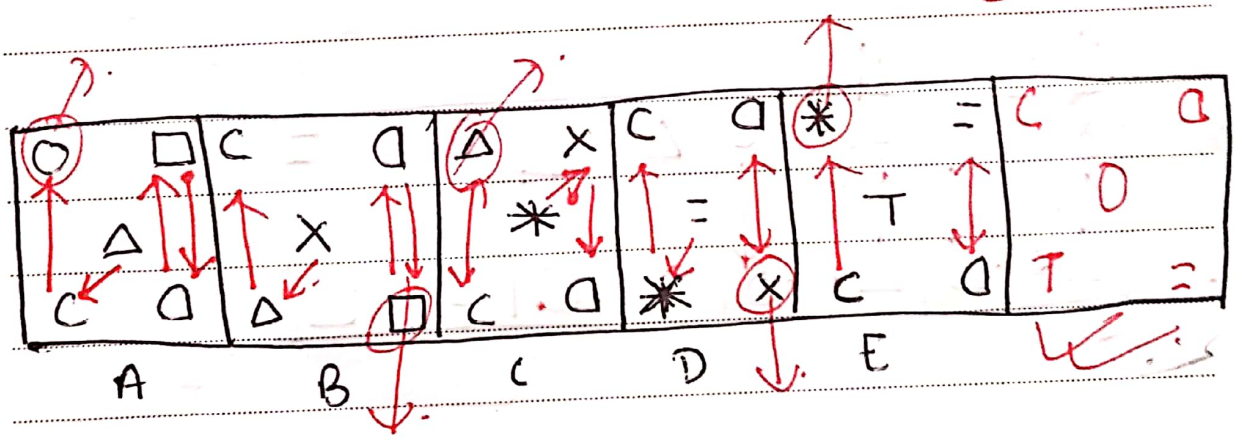

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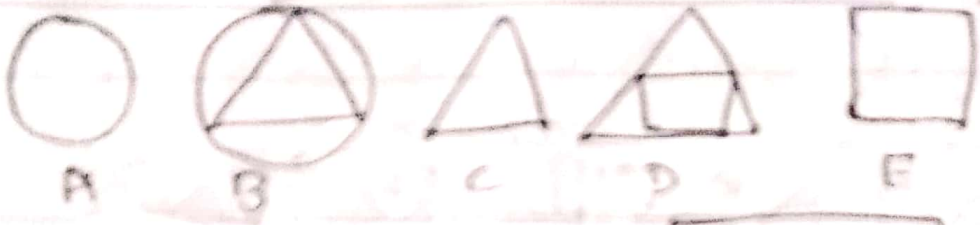
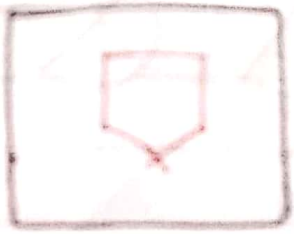
Chinnu Thattan - World Famous

6)





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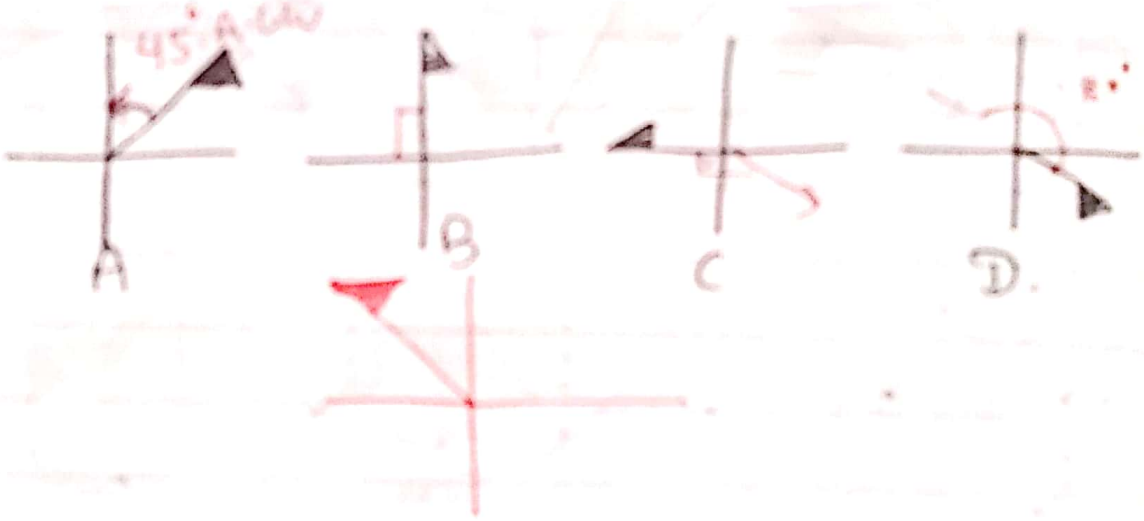
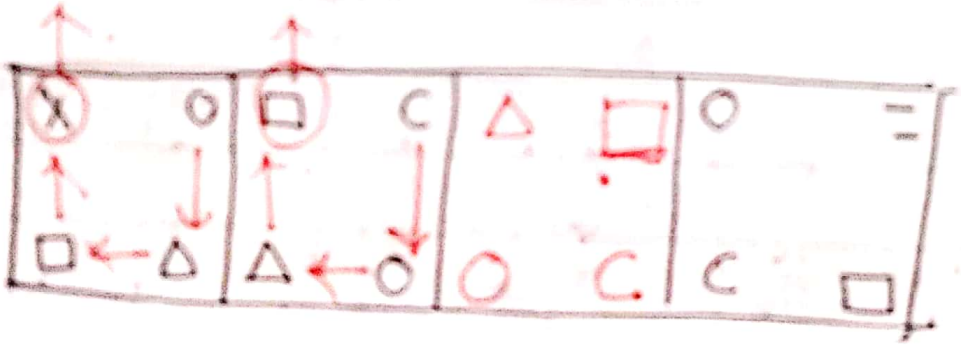


(Ans)

8)



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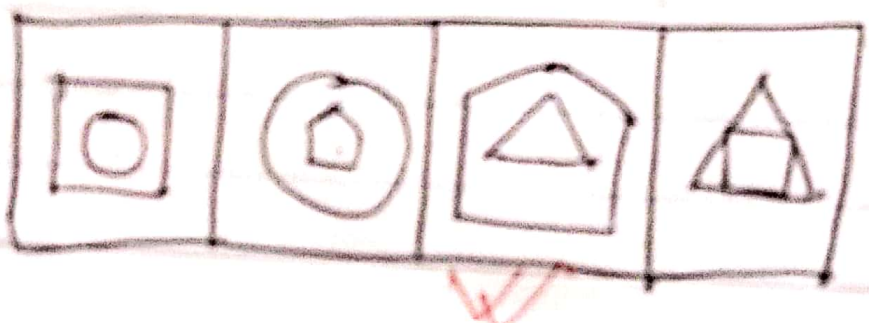

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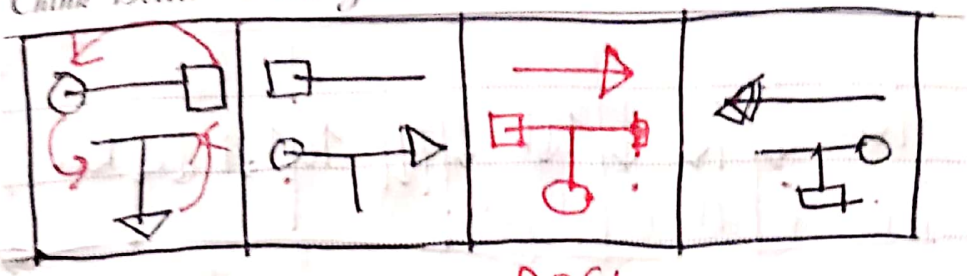
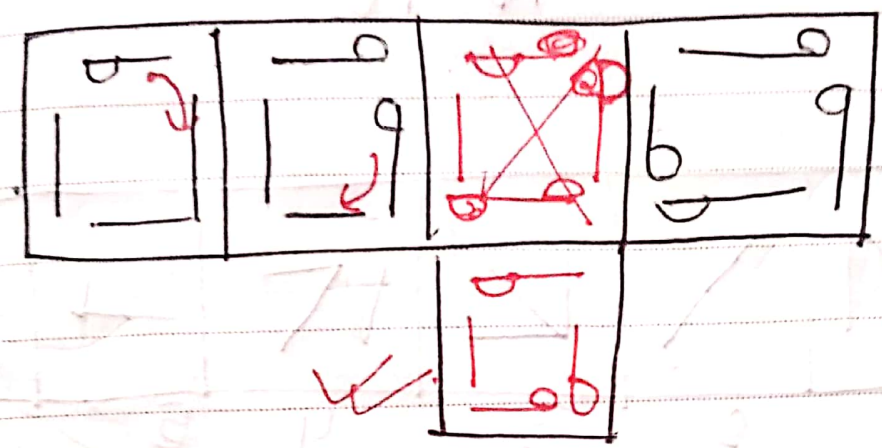
10).



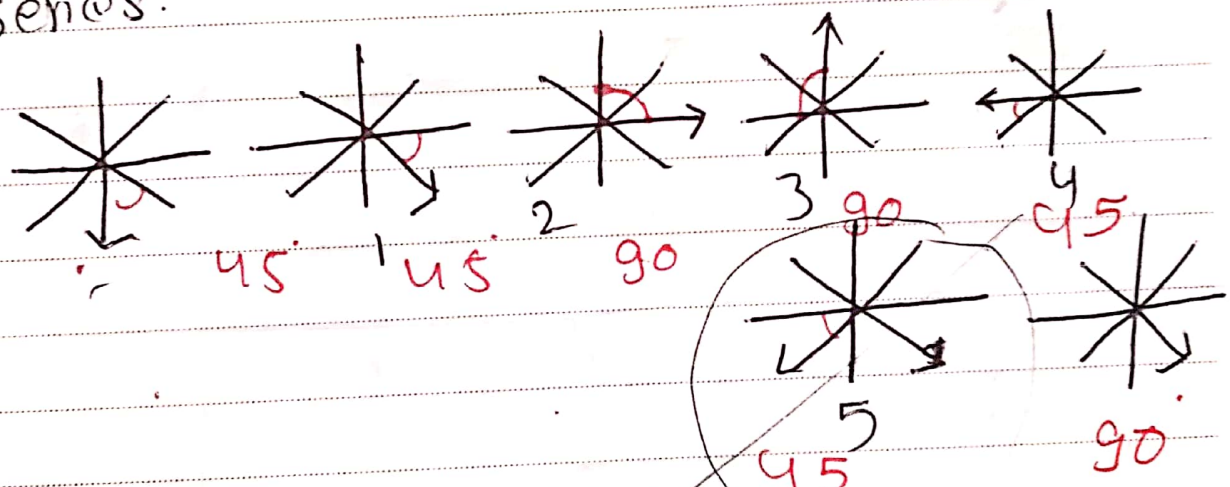
Ans:

11).



12) Find the wrong figure in the given series:

a).



Ans: — wrong figure

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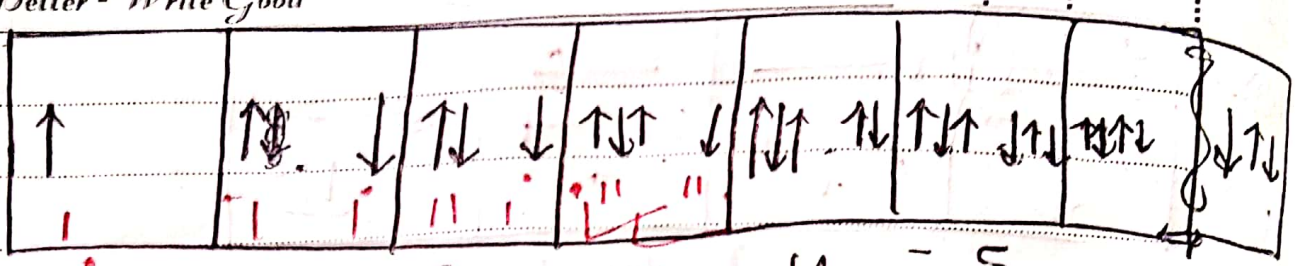
13)

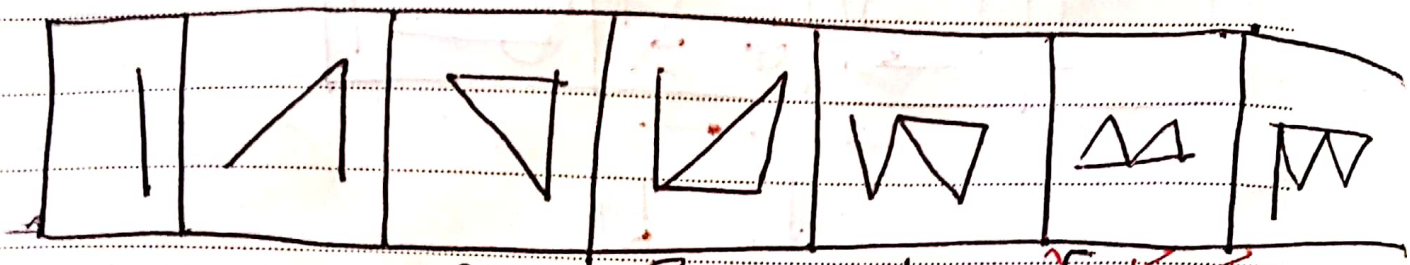


1 2 3 4 5

3

ઉદાહરણ

4)

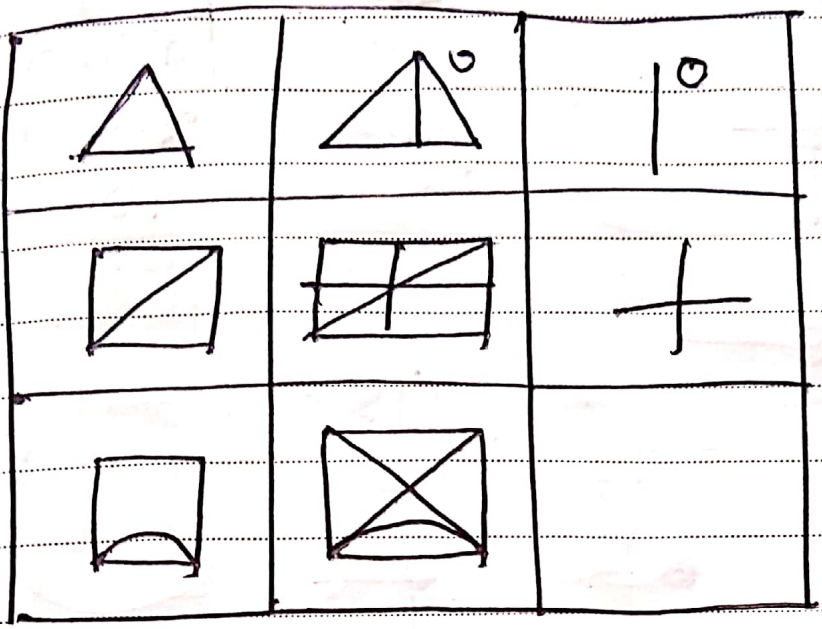


1 2 3 4 5

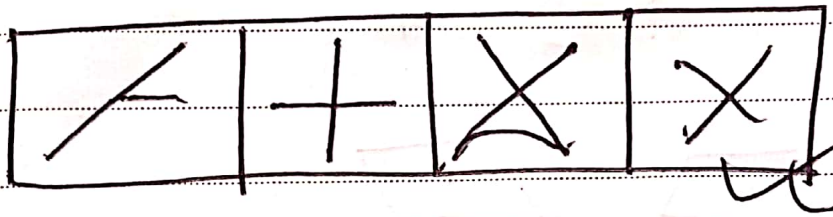
Think Better - Write Good

Figure matrix:

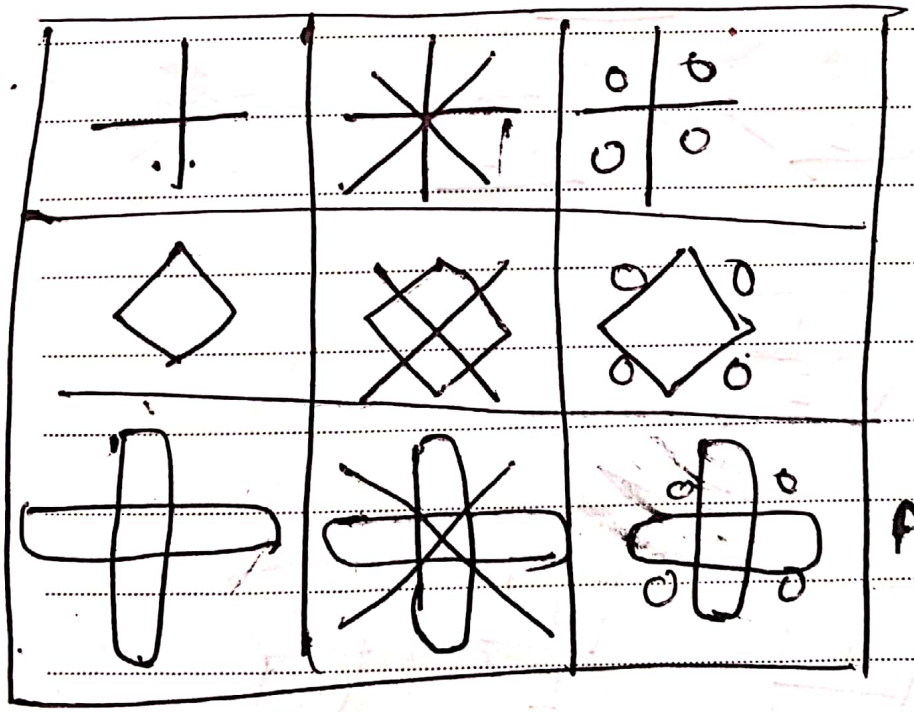
1).



1st & 2nd को common हटाने पर fig. 3rd हुआ।

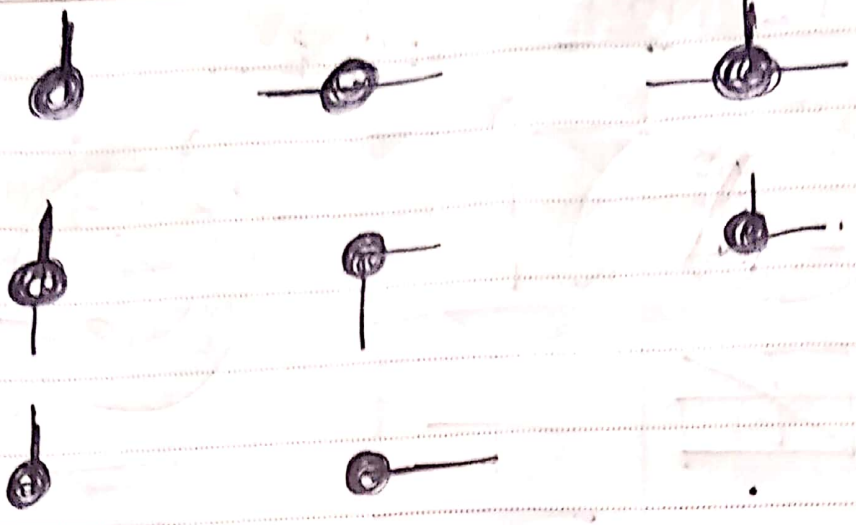


2).

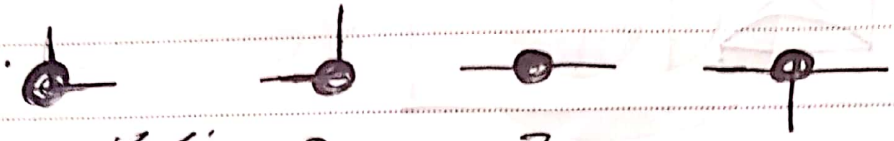


Ans.

3).

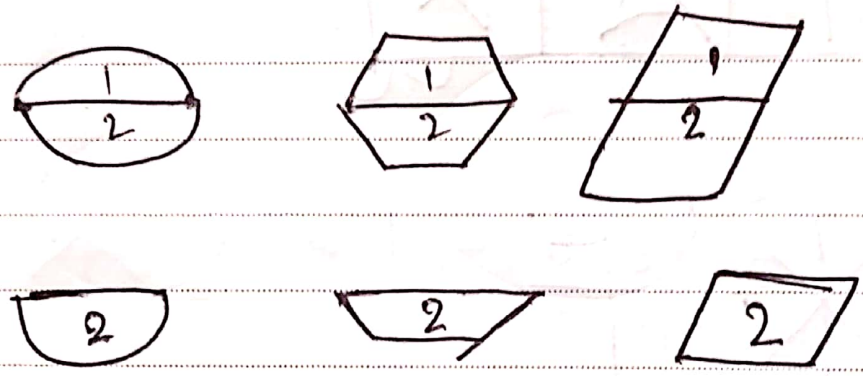


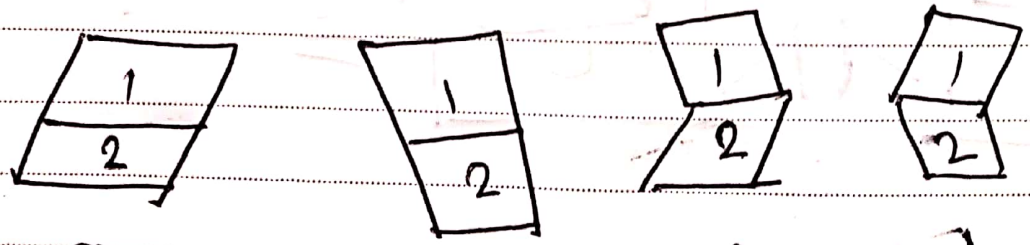
1st 2 2nd का common 3rd in row.



1 2 3 4.

4).





a) b) c) d)

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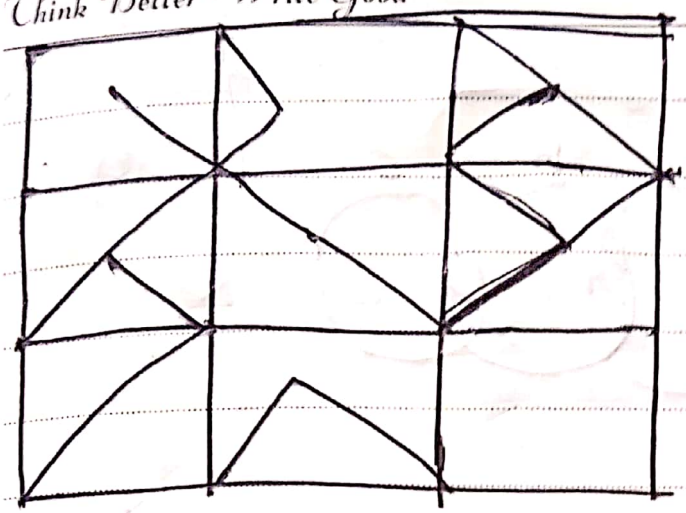
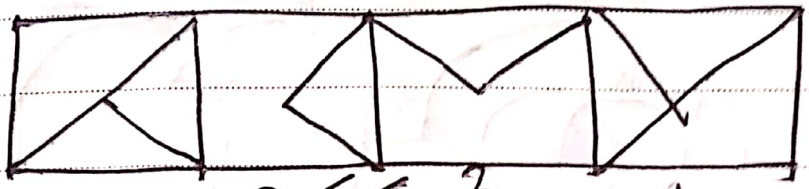
Think Better - Write Good

5).

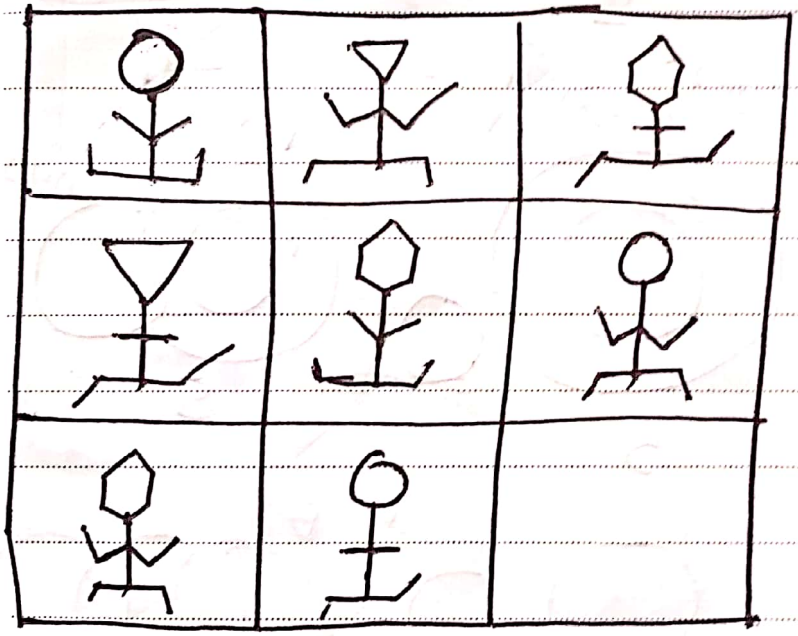


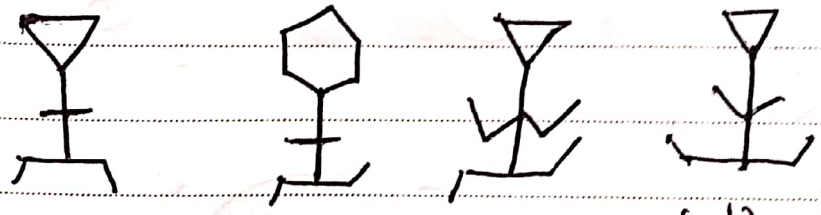
1st & 2nd row has common line with 2 & 3rd figure.



1 2 3 4

6).



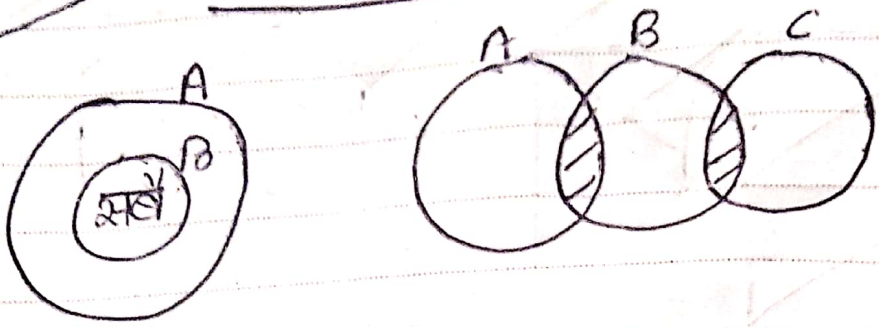


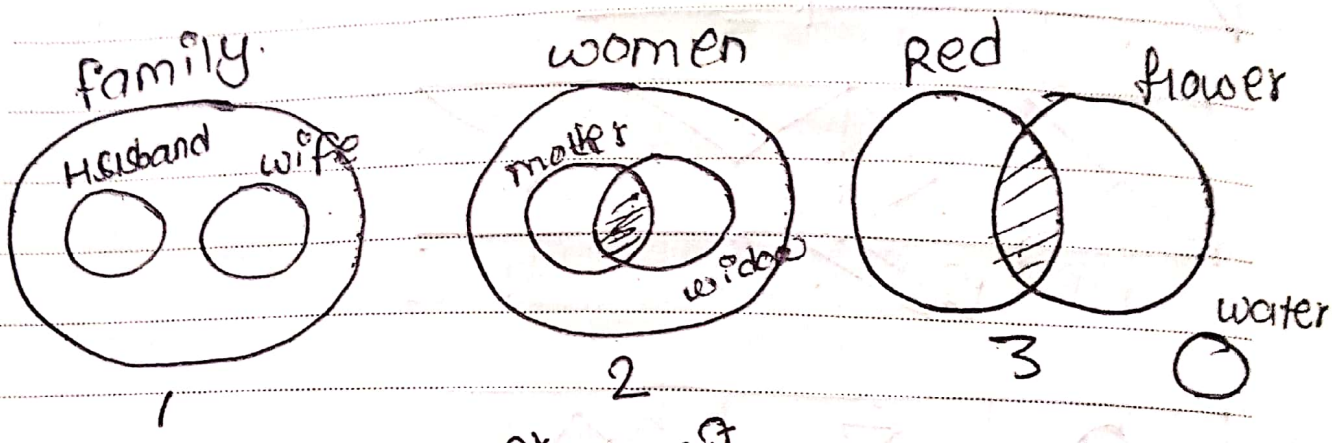
a) b) c) d) ✓

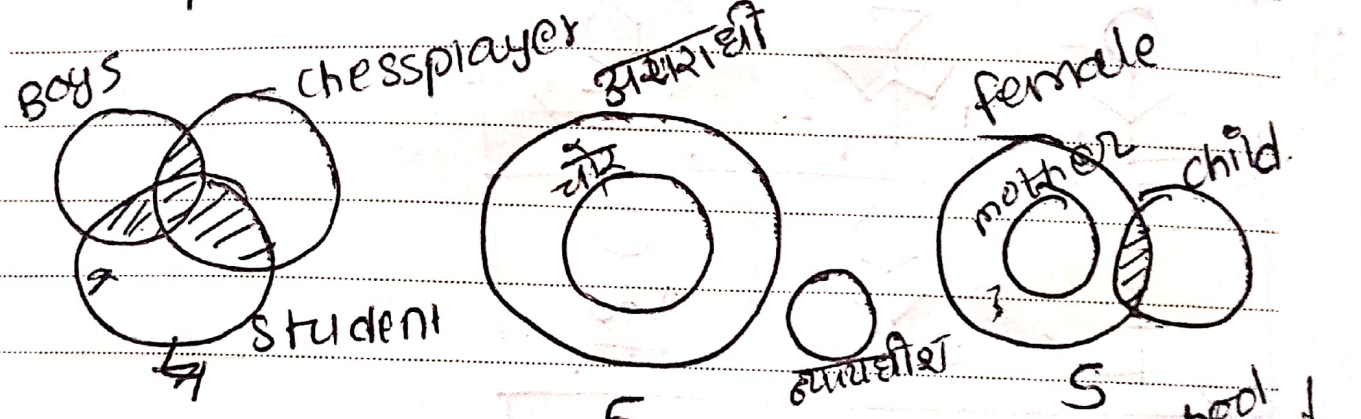
mero-master.com
Chinta Matter - Write Good

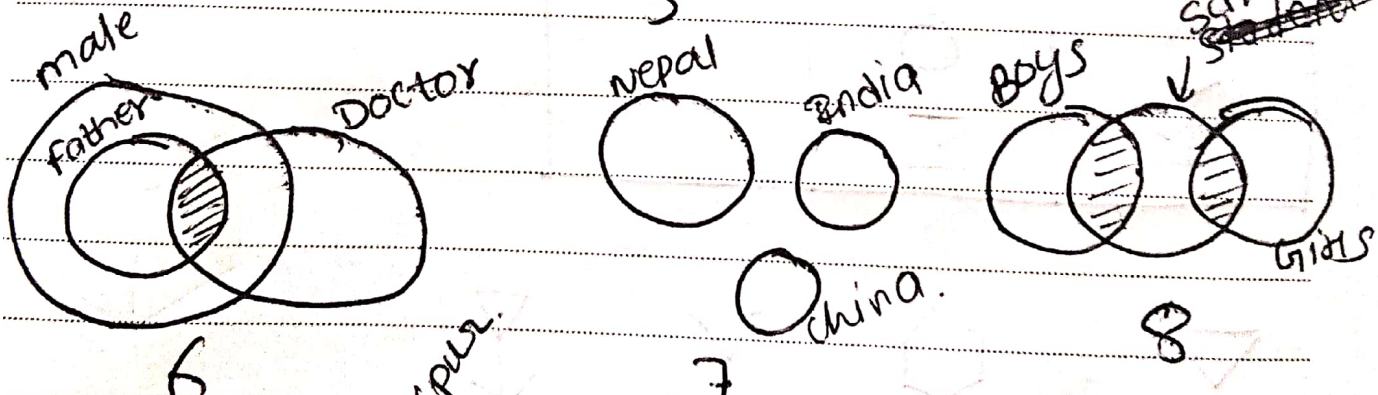
Venn-diagram.

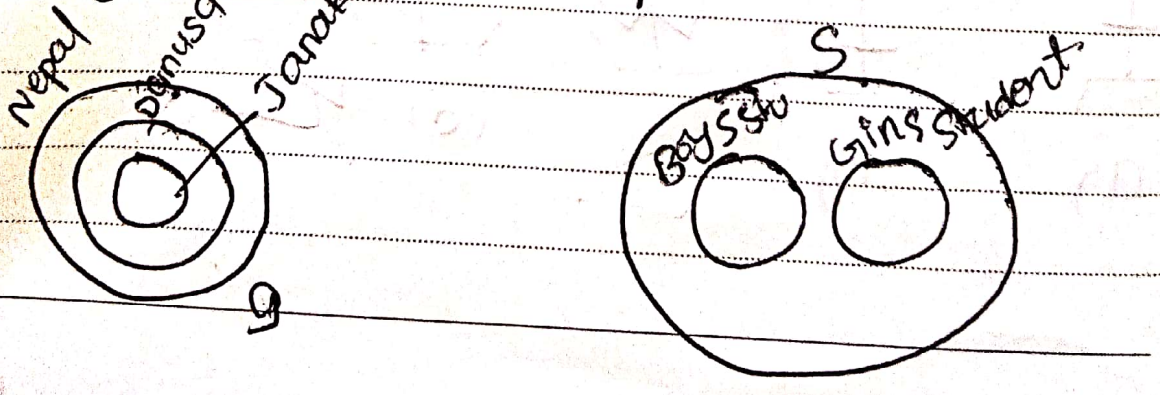
widow
1
~~fatyal~~











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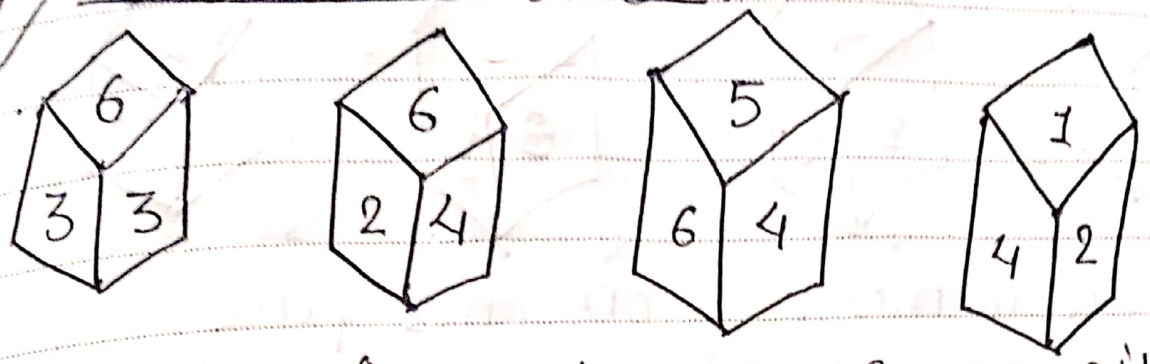
cube and Dice :-

D.



which no. is on the face opposite of 6?

$$\left\{\begin{array}{l} 1+6=7 \\ 2+5=7 \\ 3+4=7 \end{array}\right\}$$

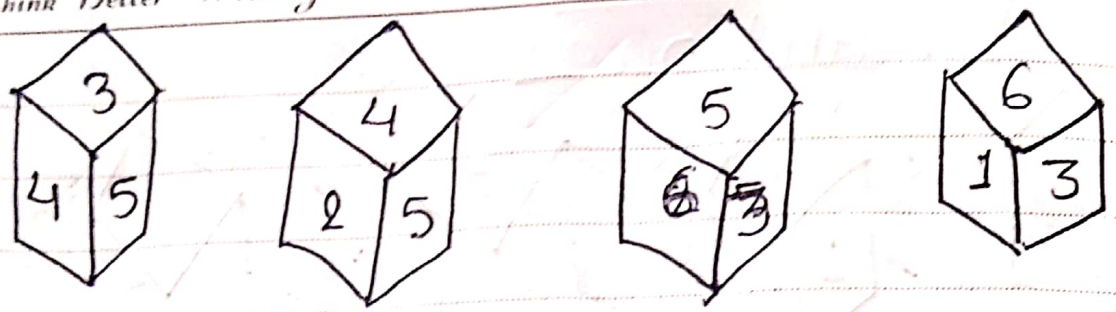
soln,, 6 सँग कुन कुन no. हरु जोड्दा,

6 = 3, 2, 4, 5

अब दिन, Ans. त्यही हुन्छ।

i.e. (1)

2).



Which number is on the face opposite of 6?

Soln,,

6 = 1, 3, 5

नदेखिने : 2, 4

3 = 4, 5, 6, 1

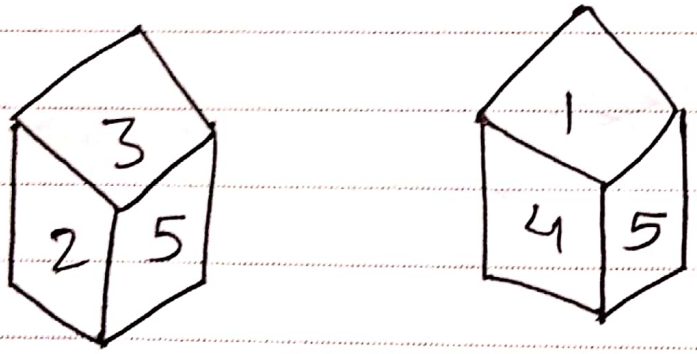
opp ⇒ 2.

5 = 2, 4, 3, 6

opp ⇒ 1

∴ opposite of 6 = 2 4

Type-2 : find the opposite no. of 5.



Soln,, 5 = 3, 2, 1, 4

opp ⇒ 6

opp no. of 3.

common no- 5 same face मा बस्नेको द भने

, यसेक face को opp. चाही face हुन्छ।

i.e.

opp. of 3 = 1

" " 2 = 4.

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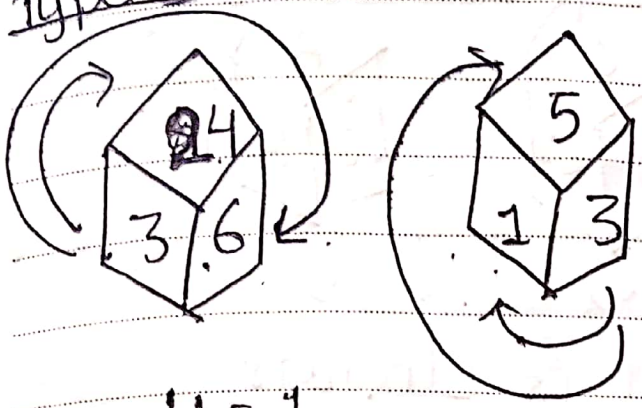
Type-3



4 = 1

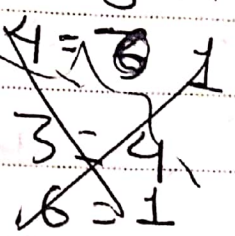
6 = 5

common no. diff. face માં ક્યા મળે, પહેલો c.w no. opposite હશે. (આની big. ઓ)

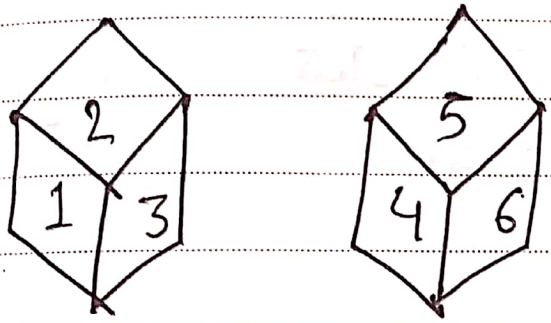
opp. of 4 = 1

opp. of 3 = 4

6 = 1



Type-4



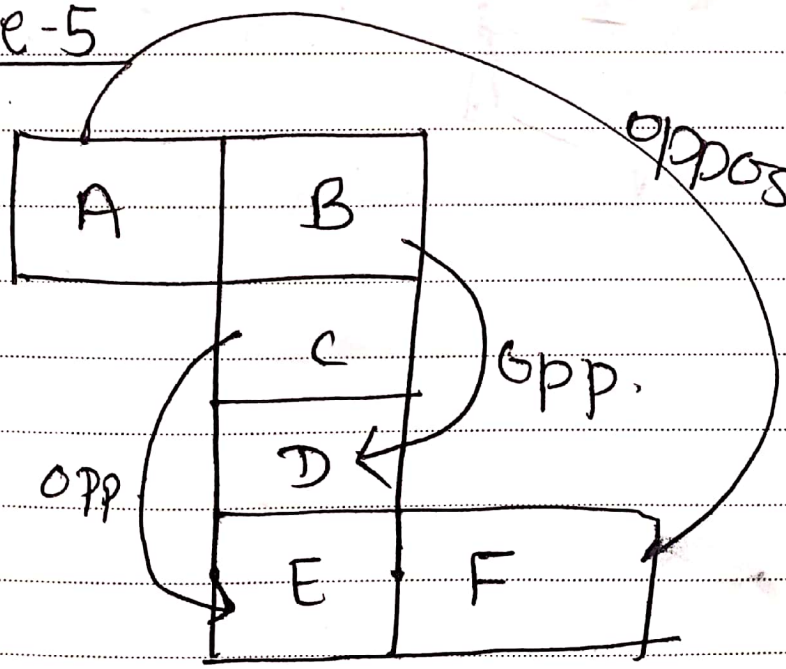
કુલ પણ common હોવા મળે

1+6=7

2+5=7

3+4=7.

Type-5



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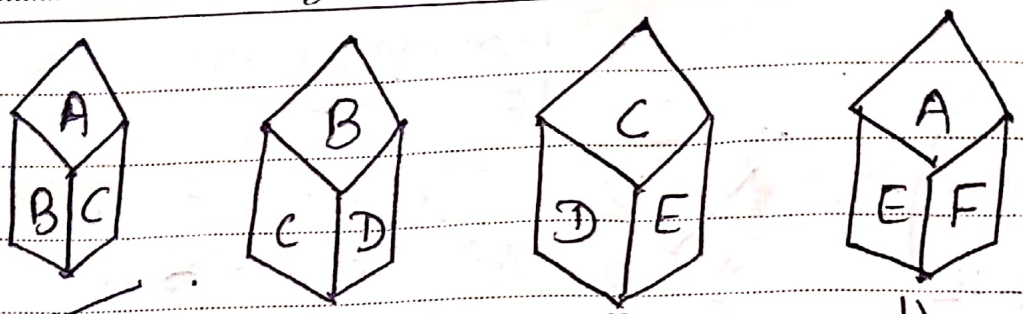
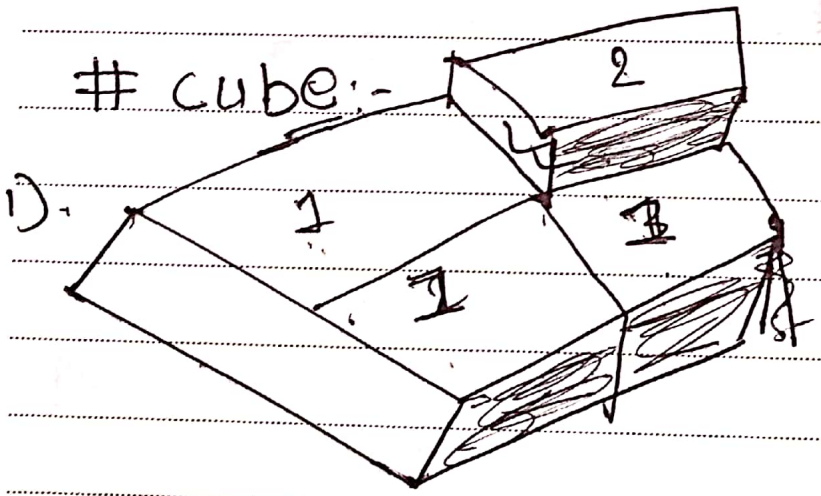


a). b). c). d).

choose the box that is similar to the box framed from the given sheet of paper X.
find the right dice

soln,,
opp. को सँगै हेरियो भने wrong.
opp. पर्ने भने right.

cube:-



1).

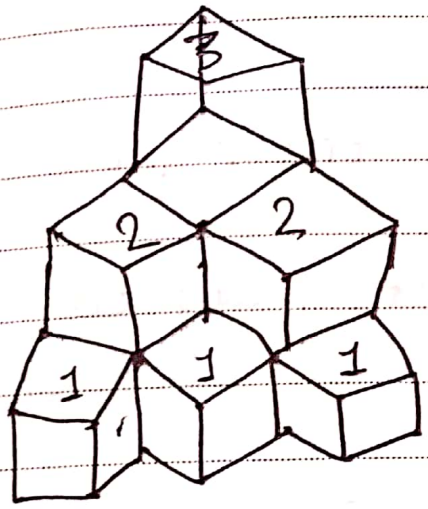
find the no. cube:
1 + 1 + 2 = 5

2).

$\Rightarrow 1+1+1+2\times2+3$

$= 10$

#.



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Statement & conclusion:

1).

Statement :- If all players play to their full potential we will win the match. we have won the match.

conclusion :-

I) All players played to their full potential.

II) some players did not play to their full potential.

A). If only conclusion I follows.

B). If only conclusion II follows.

C) If neither I nor II follows.

D). If ~~neither~~ both I and II follows.

2). Statement:

2). money plays a vital role in politics.

conclusion:

I). The poor can never become politicians.

II). All the rich man take part in politics.

A). If only conclusion I follows.

B). If only " II "

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C) If neither I nor II follows.
D). If both I & II follows.

3).

Statement: No country is absolutely self dependent these day.

conclusion: I) It is impossible to grow and produce all a country need
II) countrymen in general have become lazy.

Ans:-
A). If only conclusion I follows.
B). If only conclusion II follows.
C). If neither I nor II follows.
D). If both I & II follows.

4).

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Logical Reasoning.

Q.1) Find the sum of number 1 to 100

Soln,,

$$\text{Sum} = \frac{n(n+1)}{2}.$$

$$\frac{100(100+1)}{2}$$

$$= 101 \times 50$$

$$= 5050 \#.$$

2) find the sum of number 20 to 40.

Soln,,

$\frac{n}{2}(A+L)$ → बिचको संख्याको योगफल सोध्यो भने

A → 1st term

L → last term

$n = (L-A)+1$

$= (40-20)+1$

$= 21$

$$= \frac{21}{2}(20+40)$$

$$= \frac{21}{2} \times 60^{30}$$

$$= 630 \#.$$

3) # Sum of odd & even number:

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1. Find the sum of the odd number 1 to 10.

Sol^n 5 वटा

$(1+3+5+7+9) = 25$

no. of odd number ⇒

~~प्रश्न~~ ques. मा even no. मा छ भने, odd मात्र ⇒

no. of even = no. of odd = $n/2$.

(even+1) = odd no.

1-15

7-even

8-odd

$n^2 = 25$.

Ques. मा जति वटा odd no. छन् त्यसको square गर्ने।

2). Find the sum of the even number 1 to 10.

Sol^n 5 वटा

$(2+4+6+8+10) = 30$

$n^2 + n = 5^2 + 5 = 30$.

no. of even no.

1 — 100 ⇒ $\frac{100}{2} = n = 50$

$n^2 + n = 2550$

note: यदि odd र even no. दिए त्यसको square + एही even no.

Q 3). Find the sum of the odd no. 10 to 20

$1 - 20 \Rightarrow 100$

$- \quad 1 - 10 \Rightarrow 25$

$10 - 20 \Rightarrow 75$

अन्तिममा पहिलो संख्या जोड्नु पर्ने if first no. in ques's odd.

Even!

$1 - 20 \Rightarrow 110$

$- \quad 1 - 10 \Rightarrow 30$

$80 + 10 = 90$

1st no. even भएर जोडेको

4). Find the sum of first 5 square numbers.

Soln,,

$$1^2 + 2^2 + 3^2 + 4^2 + 5^2 = 55$$

$$\frac{n(n+1)(2n+1)}{6} - \frac{5(5+1)(2\times5+1)}{6}$$

$$= 5(11) = 55$$

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Think Better - Write Good

5). Find the sum of first 5 cube number.

Soln

$$1^3+2^3+3^3+4^3+5^3 =$$

$$\text{Sum} = \frac{n(n+1)}{2},$$

$$\text{sum of cub} = \left\{\frac{n(n+1)}{2}\right\}^2$$

$$= \left\{\frac{5(5+1)}{2}\right\}^2$$

$$= 15^2$$

$$= 225$$

Handshake :-

* each other at once

$$\frac{n(n-1)}{2}$$

1). If 40 people handshake each other at once, then how many times handshake are there.

Soln,

$$\frac{40(40-1)}{2} = 20 \times 39 = 780$$

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→ played to each other at once, $\frac{n(n-1)}{2}$

100 ⇒ $\frac{n(n-1)}{2} = \frac{100}{2} \times 99$

$= 50 \times 99$

$= 4950.$

2). If 5 people A, B, C, D & E Handshake to each other at once. How many times handshake are there.

Soln//

$\frac{n(n-1)}{2} = \frac{5(5-1)}{2} = 10.$

each other at once/ each other one/one time > $\frac{n(n-1)}{2}$

Each other 4 times ⇒ $\frac{n(n-1)}{2} \times 4$

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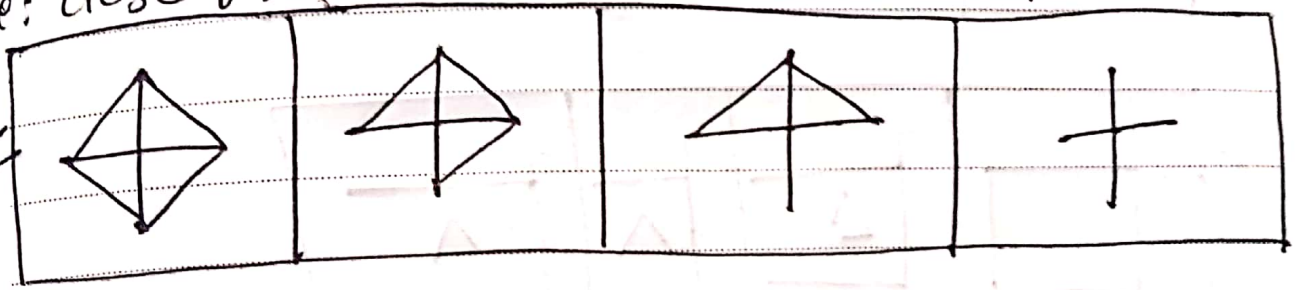
Knock out

note :- Knock out चरण सम्बन्धी सोधेमा जम्मा टिम संख्या भन्या ½ कम हुन्छ।

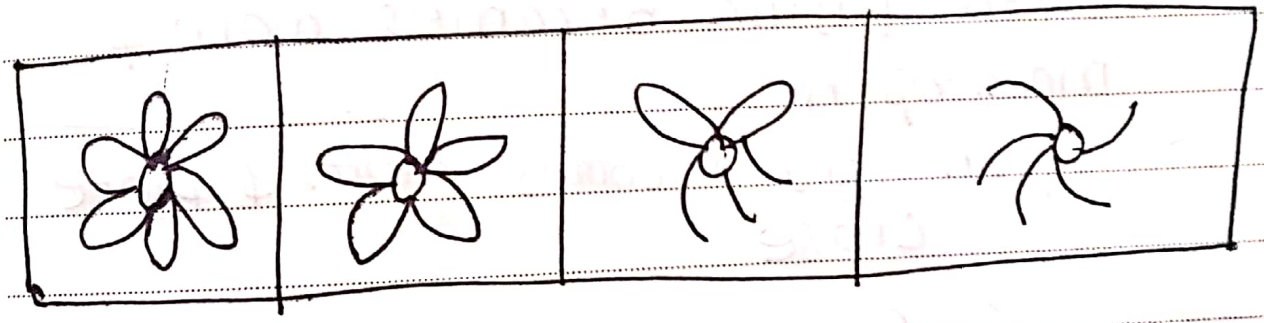
#Rule detection :-

Rule: close fig. becomes more & more open

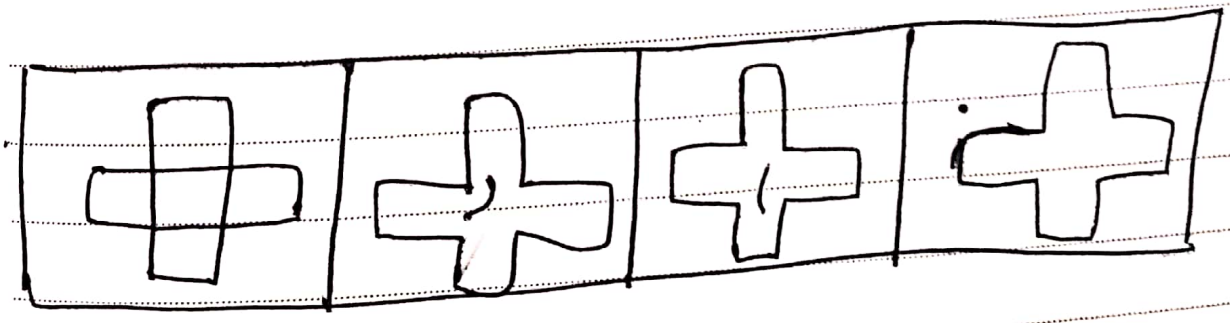
a)



b)

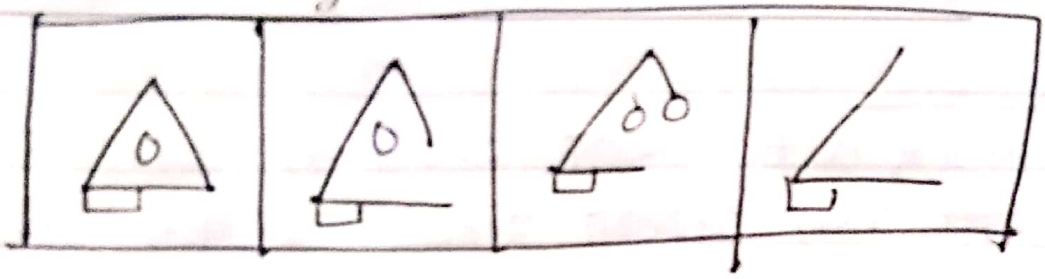


c)



2).

a)



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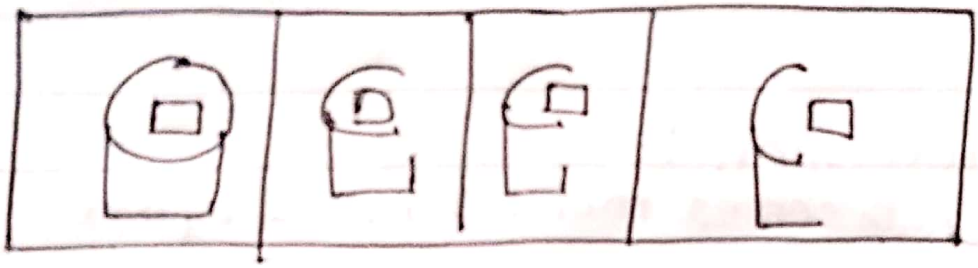
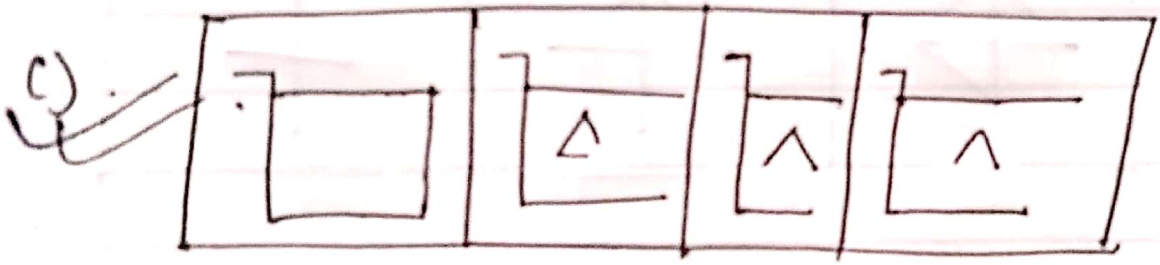


c)



Rule:- closed figure becomes more & more open

- open fig. becomes more & more close

कि अगाडी कि पछाडीबाट हेर्ने